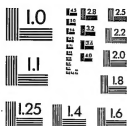




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Thomas A Edison Papers

A SELECTIVE MICROFILM EDITION

*PART IV
(1899-1910)*

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Lisa Gitelman
Gregory Jankunis
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Gregory Field
Aldo E. Salerno
Karen A. Detig
Lorie Stock

Editors

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at
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The original documents in this edition are from the archives at the Edison National Historic Site at West Orange, New Jersey.

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**Edison Ore Milling Syndicate, Ltd., and Related Companies
Standard Construction Corporation, Ltd., Files
Correspondence (1903)**

This folder contains correspondence and other documents relating to the work of the Standard Construction Corp., Ltd. Most of the letters are to or from Edison and William Simpkin, chief engineer. Included are numerous drafts in Edison's hand. The documents deal mainly with the design and construction of the Dunderland works and operations at the Edison Portland Cement Co. in Stewartville, New Jersey. Several documents pertain to briquetting, including reports by Simpkin and Professor Henry Louis. Also included are references to Edison's meetings with Simpkin in Florida. Some of the letters are accompanied by drawings.

More than 90 percent of the documents have been selected.

ALL LETTERS SHOULD BE ADDRESSED TO:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Standard Construction Corporation Limited.

Fitzalan House, Arundel Street.

London, W.C.

No: 17.

January 2, 1903.

THOMAS A. EDISON, Esq.

Send to Hunter

Dear Sir,

Mr. Hall is mailing you to-day a blue print ^Eshowing the many points in the Crushing Rolls which I think in your interests, and in the interests of the Syndicate, ought to be protected in this country, as I see nothing in the Patent Specifications which have been handed to me by Capt. Pollen covering some of the specific parts shown on the print and described in the accompanying specification.

I have only carried this specification out in my own words, leaving it to the Patent Attorney to put it into proper form and leaving it to him also to put the claims in, in a proper manner.

If you think I have covered all of the points worth covering, please to cable us and the matter can go forward, but if you have any additions, alterations, or suggestions to make, kindly let us have these at your convenience.

You will note that I have shown two ways to secure the plates to the Roll Centers, - one the manner which we are at

T.A.E.2.

present using, and another showing studs and nuts, not that I think the stud and nut is any better or perhaps not anything like as good as the manner which we are now using, but it is simply put in to prevent others from using a similar device.

It is not quite certain yet the exact day on which I shall leave here to pay my expected visit to you, so I will write you later or cable you with reference to this. Trusting you may have a very happy and prosperous year, I am,

Yours most sincerely,

Wm. Simpson

Prints not in yet
J. P. Mandel

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Standard Construction Corporation Limited.

Fitzalan House, Arundel Street.

London, W.C.

January 9, 1903.

H. E. DICK, Esq.

Dear Mr. Dick,

I have just received your cable saying that Mr. Edison leaves for Florida on the 20th February, for which I am greatly obliged. There are a great many things which I wish to become accomplished facts before I cross and as Mr. Edison will be in Orange up to the 20th of next month I shall delay sailing until the end of this month and this will enable me to complete what I have in hand and also enable me to bring with me a great many more drawings so that I can thoroughly discuss the whole of the layout with Mr. Edison.

I have just returned from Berlin where I have been taking up the matter of the Generators, etc. with Mr. Bergmann. He has I think written either you or Mr. Edison that the contract for this work has been placed in his hands. I am sure that this will be satisfactory news to both of you. This was not done without a considerable fight as some of our friends here were very anxious that the contract should be placed in this country and particularly one who is very much interested in the British

Westinghouse - it is not necessary to mention names. However, knowing that you and Mr. Edison were desirous that this contract should go to Mr. Bergmann, if it could possibly be managed and his prices were such that it would not be detrimental in any way to our Company, I took it upon myself to urge this matter very strongly with the result as stated.

There is going to be a big fight over the magnets and when I come over I shall discuss this matter very thoroughly with Mr. Edison and probably have a few suggestions to make which I think he will agree to. There is one thing in favour of placing the magnets with Mr. Bergmann and that is it will at once enable us to comply with the German Patent Law by having the magnets manufactured in that country.

When I have decided the exact date on which I shall leave here I will cable Mr. Edison so that you will know when to expect me. Everything is going on very well and we are making good progress.

Yours very truly,

Wm. Simpson

ALL LETTERS SHOULD BE ADDRESSED TO:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANGOLLI, LONDON.

Standard Construction Corporation Limited.

Fitzalan House, Arundel Street,

London, W.C.

January 20, 1903.

H. E. DICK, Esq.

My dear Mr. Dick,

I have your favour of the 8th inst. and notice that you will be sailing on the 7th of February. I understand however from Mr. Hall that the other day he received a cable from you in which you said you would arrive here on the 20th February, so from that I take it that you have changed your mind and that I shall see you, as I hope I shall, in Orange before you sail. What is keeping me is this, that I think it absolutely imperative to place the order for the structural work of the buildings and conveyors before leaving here and take advantage of the now existing low prices. I have been watching the market very carefully all along and in every case so far have been able to come in and take advantage of prices and I am satisfied if I had not been able to do this we would have been obliged to pay much more for our work than the prices at which so far I have been able to make contracts for the work which has already been let out.

H.M.D.2.

I am bringing with me details of everything which I have done so that you and Mr. Edison can go over it with me, and I am satisfied it will meet with the approval of the both of you. I shall leave here on the 31st inst. or the 4th February and will cable Mr. Edison the day I sail so that you will know when to expect me.

With best wishes, I am,

Yours very truly,

Wm. Sampson

5-CLT.

ALL LETTERS SHOULD BE ADDRESSED—
ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Standard Construction Corporation Limited.

Fitzalan House, Arundel Street.

London, W.C.

January 23, 1903.

Dear Mr. Dick,

Replying to your favour of the 13th inst. would say that when I come over I shall have with me the whole of the specifications for all of the work which we have done up to the present, including of course the specifications and guarantees on the motors as I intend to discuss very fully the whole of this with Mr. Edison.

It looks now as if I shall be able to leave sometime between the 31st and 4th but I cannot tell at this writing as they wish to have a special meeting before I go to give me some instructions of which at present I don't know the slightest thing.

Trusting I shall have the pleasure of seeing you in Orange before you leave, I am,

Yours most sincerely,

Wm. Simpson

H. E. DICK, Esq.

Letter No. 16

Feb 24 1903

Dumplin -

I have gone all over the 6 record books of Cement runs and have got things pretty well worked out, I will send results of whole when I go north but thought I would send you briefly some conclusions.

1st: Should be covered closed shed for say 40 cars in winter with enough steam coils keep ore from freezing in cars. also journal oil from getting solid

2nd: Steam pipes resting against hopper under Grants to give heat to iron of hopper to prevent ore freezing & blocking hopper -

3rd: Pinion and large gear into which pinion meshes are altogether too narrow. that has been one of the troubles on our Conveyors which were heavily loaded for instance 104- Top mixing belt, Stress at Circumference of 48 head drive pulley 1500 lbs, Stress (allowing 80% efficiency for gears) on pinion about 1000 lbs. while the gear & pinion is more than ample for

2

Strength the pressure per square inch is altogether too high even if gears were on clear pitch line - but they never stay there and on a 25 HP Conveyor I think length of pinion should be at least ten inches not for strength but for diminution of pressure & there should be good oil casing - The large gear into which pinion meshes can be quite light ~~is~~ On gear 50 HP Conveyor pinion should be increased still further These Conveyors with heavy pull out on large pulley is a peculiar combination with a train meter, so pinion must be abnormal -

4th - Look out for heavy width gears on shaft of roller feeds -

5th - Look out for excessive pressure per square inch on all pinions

6th = 3 High ropes ~~we~~ we are going to turn down couplings between 3 High & Pulley drive to insert an arch plate. This permits having a rope always spliced & ready & this plate being taken out rope can be got in - 4 bolts in Coupler will be enough as more cause delay -

7th = twice the number of side guide rollers wanted on bottom of conveyor belt - also these rollers ought to be ~~be~~ two inches longer -

8th. Freddy & I have made several flexible couplers ^{for motors} at our little laboratory. I have one now that is perfect will send you drawings from Cement Works. —

9th You remember we had a sprocket wheel on 3 Highs to drive roller feed we ~~are~~ are going to utilize this to expedite putting in chain pins from which a great loss of time is had - If or left away we put a Worm wheel on shaft of which is a sprocket - by a pin in chain we connect quickly + by hand crank bring roll around so shear pin holes match You will have to have something like this + this is simple -

10th Do not fail to have the blocks connecting top + bottom of housing of 3 High strong + rigid - the trouble we are having with our pulley

drive bearings is due to shock shifting
of bearings in housing of driven roller
not a permanent movement so as to
put shaft out of line but ~~is~~ a concussive
springing - & this is transmitted to pulley
shaft =

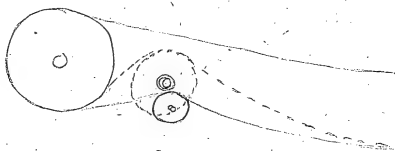
11. Stud bolts locked by small wire
running thro heads where bolts
are around a circle is not sufficient -
the wire bend by constant shock -
either a larger wire or something
else for locking in concussive
machinery is necessary. oil joints etc
some lock -

12- Bore with nuts & center on Roll
do not lock except use RR Car Center
with slot & center taper so it is
driven in dead against head of nut
& bent—

~~13- Use 10 ply belts on 31~~

13- What size @ dia & length pinions
you going to use on Motors driving
3 High & other shafts? $\frac{1}{2}$ sure have
plenty dope in casing & put in a
plug so oil man can tell when
he has proper amount oil in ^{all} oil
casing. That's something we didn't
have at Cement. Consequently lots our
gears run dry & eat bad especially
where pressure per sqr inch in bath
was high—

14 = On conveyor belts greater arc of contact on head drive pulleys are more efficient for grip bite or adhesion than longer slack we put in on idler thus



The idler was ordinary diameter with heavier shaft & larger roller bearings. Less belt bite however, but the idler bearings gave lots of trouble make yours as in dotted lines & closer up to pulley to increase the arc of contact & bite. We say 3 inch shaft and Regular self-lubricating chain bearing well secured on wraps. Use 24 inch or more rollers. With 25 feet slack this should not slip on heavy loads —

15- You cannot make Gunny Chambers too large. The floor should be double with thin sheet iron between the two floors - ditto on top of chamber - around bottom use wood run about 10 or 12 inches high & stiff to this the gunny can be secured. Cracks in floor or cement even cause of great trouble also repairing of gunny at floor line as dirt collected at bottom outside & bulged gunny in - the board around bottom will stop this - Use stiff framing - the door was used was a failure - It was not self closing - The joint was no good - & we get a lap door always good & tight & powerfully self closing

Hand fan should be special (ie capable of
running continuously without heating -
The supply of oil heating devices should be
checked - This connections should make use
only of a different kind of pump than
the others so that can only connect fan to
run in the right direction - The fan
should be made so it can only be put on
shaft one way and provide a hand so can
be put on in one way only -
The whole fan should be stamped to protect
the entrance - design should make these
flaps about 16 inch fan -
if it is possible keep flexible coupling
within spinning chamber -

16 = ~~Use~~ shearing device on 3 shafts gets here
I should look out for this -

17 = ~~Use~~ ^{using} ~~one~~ ^{one} ~~shaft~~ ^{shaft} ~~without~~
a high speed flywheel cause a failure
in the shaft ~~is~~ ^{is} ~~the~~ ^{the} ~~impulse~~
pin ~~is~~ ^{is} ~~over~~ ^{over} ~~running~~ ^{running} = Use are going to
Use pinion in two bearings + on one end
pinion shaft put a fly wheel with shear
pins, as this is high speed it need not be of
large weight with Motor flexibly connected
Use hope to keep ampere reasonably
even = Use the unloading pressure
device otherwise given out motor,

18 = The width of commutators on Bergman
Motors are insufficient. They are annoyed
to chop pins. It would be better to increase

from fifty per cent, by employing say a
25 HP commutator on a 15 HP motor
or so. His lunch machine is a complete
failure, where there is a chance for a
American Street Car device best,

There is no reason why motors driving
receiving should not be loaded down, as
in all on case, ~~with~~ a lot of
and probably things, only a good idea
self driving - we had some trouble
with base bolts shaking loose -

Remember this is a fact, that the ordinary
man does not set pinions in pitch line.
Unless the construction permits adjustment
not one motor pinion in ten is set as

right at present they were either not on
pitch line or one edge did all the work
in addition the motor moved because bells
got loose. In my opinion - All of the
gearing should be framed together
by cast iron & assembled in the makers
factory & delivered - then the vibrating
structure of the Mill would not be
serious - otherwise there is liable to
be continuous & never ending trouble.

19 = Raw hide washers on rollers are not
the thing - they think I am going to
test for right thing & will send you
result -

14- ~~Isz no chlorine water starting~~
~~leaking from them tanks so they will~~
~~stand the whole amount. ~~for~~ at least~~
~~an hour at least - unless they are to be used~~
~~otherwise which I think~~

15- Could you have staid longer & would
have outlined the electrical scheme
for operating plant & showing stopping
the fuel oil if you are seeing where
could not release valves -

21- Do not use any glass sights in water
leveling - They will break from the jar.
They can be a locked overflow plug - The
Oil system management isz will ask Blush
will keep plenty of it -
Dont forget that long heavy chains are
a necessity also that one of the

a part of the running mill it would be
very serious.

23- The springing & bending of the fan shafts
in the lower house, because too small as
springs, from which a great deal of damage.

24- More than - Bad fall and danger of
cracking furnace with marked danger
to new cast iron from chimney.

E

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Standard Construction Corporation Limited.

Fitzalan House, Strand Street,

London, W.C.

No: 18.

April 7, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

Since my arrival here last Tuesday I have been very busy going over the work that had been accomplished during my absence and am now taking up the revision of the drawings of the Fine Grinding Rolls which we discussed when I was with you in Florida.

I find that without going to a big expense it is hardly possible to make these Rolls so that we can change at will the number of sheave pulleys on the ends of the shaft. The Rolls as designed are intended for six ropes, as per your original instructions, and if we arrange these so that eight ropes can be used, you will readily see that it will necessitate a new spreader as the centers of the take off ropes on each side will be two pulleys wider and also the angle will be changed.

With the Rolls at Stewartsville, supposing we have a pressure of 50 lbs. per square inch in the cylinder, there will be with eight ropes a pressure of 19400 lbs. on each end of the

T.A.B.2.

shaft; with the 10 inch cylinder, such as we have designed for Dunderland, with 80 lbs. pressure, there will be with 6 ropes a pressure of 2260 lbs. on each end of the shaft, so that we must either decide that the 6 ropes are enough or we must change to 8 ropes and keep it at that.

On the Rolls at Stewartville we have 9/16" ropes with 36" pulleys, and on these for Dunderland we can put 3/4" rope and have arranged for a 48" pulley.

I feel sure that the 6 ropes will be ample for all our needs as we can readily increase the pressure in the air cylinder if necessary, and will not make any changes on this line until I hear from you.

With reference to the enlarging of the blocks between the bottom and top girders, - would say that we had already given this matter a good deal of attention. From the rough sketch herewith you will note that in the Stewartville Rolls the distance between these supporting blocks is 11 ft. 11 1/4 in. and that the blocks are only 10" square - the top girder being secured with only one bolt passing through the center.

In making our design for the Dunderland Rolls, we have reduced the distance between the blocks to 9 ft. as you will also see on this sketch, and enlarged the size of the blocks to 16" x 15" - being 2 7/10 ^{times} larger in area on the top and bottom surfaces than those at Stewartville. We have also arranged that these blocks shall be secured to the top and bottom girders.

T.A.E.3.

with four separate bolts as well as the large center bolt; at the same time we have increased considerably the strength of the lower and upper girders and anticipate no pinching from the spring of these girders.

I think these blocks are amply large enough and strong enough for anything, and I do not want to increase them as it will interfere considerably with my design for carrying the spreader which carries the take off pulleys, and any change of design such as suggested, i.e. making the lower part of these blocks longer, will of necessity make a design for this spreader and brackets which to my mind will not be anything like as mechanical and satisfactory as the one we now have.

We have given considerable study to this matter and will shortly send you the full details and when you get them I think you will agree with me in all I have written.

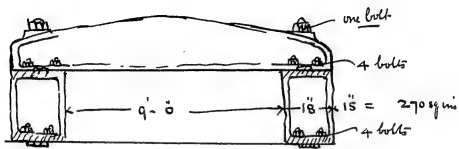
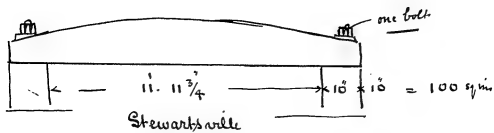
On my return here I found that everything had been going along very nicely, and about the early part of May I expect to be in Norway and commence work on the excavations, foundations, etc. for the various buildings.

Trusting you are well, I am,

Yours very truly,

Wm. Simpson

[ENCLOSURE]



Standard Construction Corporation Limited,

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLL, LONDON.

Fitzalan House, Arundel Street,

London, W.C.

(19) put on by
Hester

April 8, 1903.

THOMAS A. EDISON, Esq.

Hester

Dear Sir,

I enclose you herewith a description of the direct connected air compressor of which I was speaking to you. I have no figures as to the cost of same but shall be pleased to get them for you at any time. Would say that the machines are well built and are giving great satisfaction wherever they are used.

Yours very truly,

Wm. Simpson

Peperink E.

REPRINT from

THE
ELECTRICAL TIMES,
with special illustrations. "LIGHTNING."
1st January, 1910.

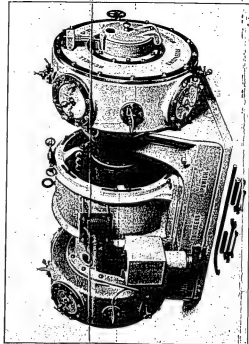
We recently had an opportunity of witnessing tests of the new electrically-driven compressor illustrated herewith.

As the use of the electrically-driven compressor is increasing in workshops, this new electrically-driven auxiliary should have a large field of usefulness before it.

It is well known that the ordinary type of straight line steam-driven air compressor leaves a good deal to be desired in regard to steam consumption; and as many engineering firms, especially the large shipbuilders in the North of England, are in a position to purchase or to generate electric energy at an extremely low cost per unit, they will doubtless welcome the introduction of this electrically-driven compressor.

This machine represents the latest form of the Revell quadruplex compressor, which has been manufactured by Messrs. Revell & Co., of Ipswich, for upwards of four years, and has become well known in several industries.

The new machine has been specially designed for pressures of 100 lbs. and upwards, the particular point kept in view being the arrangement for driving direct by electric motor without the aid of a belt.



ELECTRICALLY-DRIVEN QUADRUPOLE CONFINEMENT.

intervention of any gears, chains, belts or other speed-reducing apparatus.

The difference between this machine and the ordinary machine is that the drive is provided by a company for the first time with a variable speed (lower pressure and power) in that the speed of the machine is not constant. The first stage is a compound or two-stage in the construction, and the second stage is obtained by putting a smaller piston and cylinder transducer in the middle of the two stages.

This construction is clearly above the ordinary mechanical transmissions we give, and it has the great advantage that the speed of the machine is not constant, but it is possible to change the speed of the machine in constant thrusts, so that the machine can be used for a long time without any wear for the machine. By the employment of two stages of transmission, the machine is able to work for a long time without any wear for the machine. It is also possible to make the stroke shorter and to increase the speed of the machine.

One of the main advantages of this machine can be used without

The machine is also made double-ended; that is, there is a complete compressor placed on each side of the beltplate or frame carrying the motor. This again enables a higher speed of revolution to be used than if a single compressor of double the capacity were made.

From the photograph which we reproduce it will be seen that the whole plant is neat and compact, and its working leaves nothing to be desired.

There are only two bearings for the motor and compressor together, the motor itself having no bearings as the field magnets are mounted on the motor frame.

adopted by Messrs. Reavells, in which a constant delivery pressure is maintained against the compressor while the receiver is being filled. To require limit.

It will again be pointed out that the above tests are not intended to test a compressor if one desires the tests to represent a worst case. The tests are intended to show that when working against a constant delivery pressure the losses to be debited to the compressor due to leakage of air past the piston and valves, also clearance losses, will be much more than would be obtained when testing from atmospheric pressure up to delivery pressure. A comparison of the two tests expressed will bear this out.

Tested on 300 C. E. QUINCY CO. COMMERCIAL

[illegible]

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Standard Construction Corporation Limited,

Fitzalan House, Abchurch Lane,

London, W.C.

No: 20.

April 9, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

Your valued favour of the 30th inst. to hand this morning and very carefully noted. I will take particular care that your suggestions are attended to and in this connection would say that a great many of them have already been taken into consideration in getting out our designs.

With reference to having some arrangement to move the shaft quickly on the Fine Grinding Rolls so as to get in the shear pins, would say that this will be accomplished very readily by our barring mechanism which it is my intention to put on the Fine Grinding Rolls as well as the crushing plant rolls.

I wrote you the other day with reference to the blocks connecting the top and bottom housings of the Fine Grinding Rolls.

I note what you say with reference to the securing of stud bolts and agree with what you say absolutely.

On all conveyor belts we have arranged to bring up the first idler next the head pulley as high as possible so as to get more surface for the belt and are using an extra heavy shaft with

the regular self-oiling bearings.

With reference to the gunny chambers for motors, would say that we have no small chambers throughout the plant. In every place where we have a motor it is in a large house which can, if we wish, be made absolutely dust proof and connected with the outer air for ventilation, so that I am not anticipating any trouble whatever from the heating or sparking of motors from dust. This large chamber or house also gives us ample room for working around the motor, removing armature, etc. This is a matter to which I have given the greatest consideration, and I think when it is your pleasure to go over the mill after it is running, you will find that all these points have been thoroughly attended to.

With reference to the electrical scheme for operating the plant, I will shortly send you a drawing giving a general lay out of the buildings and the location of each motor, so that you can advise me with reference to the wiring, starting, stopping, etc.

I have been trying thin copper washers in place of the raw hide and they are a success. I wish you would try a few up at Stewartsville in the worst possible places and let me know the result.

I note particularly what you say with reference to the setting of the motors, etc. and it coincides exactly with what I am going to do; and another thing, particular attention will

3.

be paid in the putting in position and securing the motors so that there should be no trouble from getting out of line.

We are just working on the fans for the blower houses and I am pleased to get your note as to the strength of the fan shafts.

With reference to the drawings for the briquetting furnaces, I have been asked by "the powers that be" over here to hold up on this matter for the present.

Yours very truly,

Wm. Simpson

[APRIL 18, 1903]

Simpkin - London

What number is this
Letter put it in
So that we know he
gets them all

I am preparing for you full inspection
report and other records hope to send you soon
as well as other things I have found wrong
when taken apart. Will send an order as
ready - Several very bad things have
developed which I did not know of &
which is going to be very serious for us
immediately - 1st The shafts of ^{one} Blowers
are ~~4~~ fifteen sixteenths dia & supported several
feet apart. They have bent so bad that we
shall take all apart and put in four inch
shafts which is none too large for the distance.
They not only have bent but the packing collar
has cut them very deeply by the wobble.
Second The ~~Motors~~ ^{are} ~~are~~ space for motors was
so small that gunny chambers were no good
as they couldn't be made ~~any~~ ^{any} larger than
the motors. Result was that they worked in thick

dust the dust burnt in Commutators & the
lathes are worn out & motors were also.

There was such a terrible Congestion & lack of any
space that nothing could be practically
done to move them. ~~I have got to move~~

~~the Blower plant, Had we got a little more room
Everything would have been good.~~

I am compelled to use a sprocket & put motors between
roller feed & Blowers. This permits all Motors being
in one long Continuous quarry Chamber,
with side doors so water can be removed & taken
between the dust bins & around the back of

same —

Second All the pinions & of course the
gears of drives on Conveyors are too small.

They are ample for strength but the pressure
per square inch is such that the heavy
loaded Conveyors have teeth worn out

third the way through. Consequently the vibration
gets so great that towards end of run the
Brushes could not be kept on the Commutators

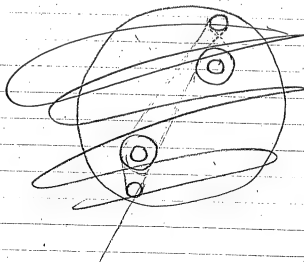
The jumping of the brushes produce sparks
 & these heated the commutator so that the maximum
 Capacity of a 25 HP motor got reduced to
 twelve - then they had shut parts well down
 to Cool. On top of Rock stock the shaking
 of the structure was terrible - & they had got
 out plans to belt down to a motor at the South.
 I put in wider gears with pinion between bearings
 put in new flexible Coupling - & we have
 been running Mixing belt for several days.
 The motor is de-rated to full Capacity it has
 neither spark or jar & the structure only receives
 a small jar from the wear on the other pinion
 & this would go out if it had been wider -

~~the~~ ~~are~~ ~~problem~~ How long before you will send
 me drawings so I can put on the final O.K.
 Haven't need a single one that is final as yet.
 Are you sure that you have enough men in
 your draughting Dept, I fear you are going

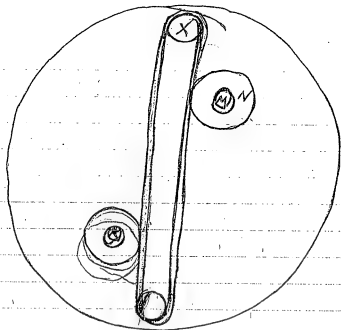
4

to get into a hole before long—

It may be possible that the Motors at the
3 High and Crushing plant rolls will
need flexible between gearing & shafting
to prevent sharp vibration waves dancing
the brushes. ~~to~~ We have tried several
flexibles on our smaller Motors & have one
that works perfect. it works so perfect we
are making one for the third 36 inch Roll.
on Motors it is made thus



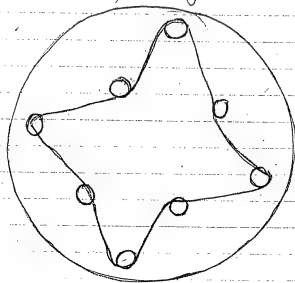
5-



Sixteen diameters, inch quarter pin X - Wheel
 N is two half inches - pin M inch quarter -
 The belt is double & stretched all around
 Edges by harness makes the width on
 25 horsepower is two & half inches -
 The disks are turned all over & balanced
 i. When shafts out true the wheels run up &
 down belt & hence the easier they run

6

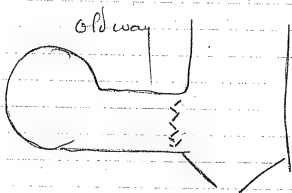
Up & down the less close the vibration
 wave go to water, with the one now
 generally used there is considerable
 vibration transmitted & it is very
 unsatisfactory. The following is
 generally used in this country
 It does not slide easy enough—

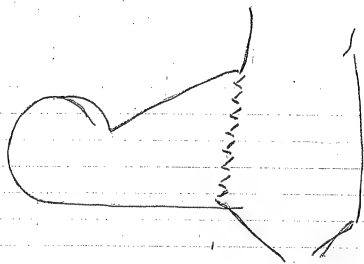


7

I have Barnes here Experimenting on
gunny chambers & we will soon
be ready to give you full data,

Could you arrange Blowers so there is a
greater height for baffle plates it would
especially improve them,





New way —

There is a great difficulty in making
a motor pinion & gear casing and bearings
so oil in casing will oil bearings.
Look out for this —

We are changing Exhauster from top
of Dryer to Earth on Concrete across
the incline & running a Downcomer
pipe from top Dryer to Exhauster,
putting in a Cyclone dust collector

and by use of a 12 inch screw at
bottom clean out dust catcher
at intervals + depositing it on 102
Conveyor — The Conveyer heat +
vibration was loud at top of Dryer —

We have trouble with bottom belts
of Conveyers running to one side also
getting under edge of side chilled rollers
+ ripping off the rubber the whole length
of the belt. — The rollers should extend
way down close to base + also be
higher + be every 50 ft apart on
bottom or return side. The top we have
very little trouble with.

Edison

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Standard Construction Corporation Limited,

Fitzalan House, Abchurch Lane,

London, W.C.

No: 21.

April 22, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

We are mailing you under separate cover a complete set of drawings for the Fine Grinding Rolls which have been carefully gone over since my return from the States, and in which you will see that we have incorporated the suggestions made by you. In this connection I would call your special attention to my letter to you of the 7th inst. with reference to the various points we had discussed.

We have not yet received final bids on these rolls from the various parties to whom we have sent the drawings, but from what we have received I feel certain that they can be bought for 5 cents per lb.

We also mail you drawings showing the lower set of 5 ft., that is, the spring rolls, and you will find on these that we have increased the length of the tension rods which go through the two bearing housings as suggested by you, making them long enough to get in six 1½" white pine washers, putting three

on each side or putting them all on one side as may be found most advantageous.

You will please note the change also with reference to the wobbler, the part that is keyed on to the end of the moving roll being turned down so that we can draw out the bearing bushing without being obliged to take off the wobbler end, as this end will be put on with a good press fit. You will notice the groove also turned in this wobbler end and this is to be used in clamping on a pair of clips when it becomes necessary to take off this casting.

We have not yet completed the drawings for the hoppers of the crusher plant embodying your latest suggestions, but have them well under way and will forward them to you shortly. I have no idea as yet how much this work will cost but will let you know after we send out the drawings.

When in the States I gave you the price at which we had contracted out the Giant Rolls, the 5 ft. rolls and the chilled plates. The Giant rolls cost 4.08 cents per lb.

The 5 ft. Rolls " 4.18 " " " "

The chilled plates " 2½ " " " "

I will have complete statements made for you from time to time giving the exact weights of each machine, etc. and the exact costs of same.

With reference to an elastic coupling, I am going to investigate one of which I have heard and of which I am told there

are over 200,000 HP. in operation varying in size from 5 to 500 HP. and which are being used for all sorts of intermittent and steady work. When I have found out just what this coupling is and have seen them actually at work, I will make and send you an understandable drawing.

I have had made and am now testing some sample idler bearings - one of which I will shortly send you just so soon as my tests are completed. We think they are first class as they embody the best features of our old idler bearings and many new features which make them much more mechanical and much more satisfactory.

Yours very truly,

Wm. Simpson

Letter 14⁵

Dumplings -

April 23/13

Look out for plenty of ^{sag} ~~shut~~ on conveying belts at driving end. We have had endless trouble here with starting belts loaded when mill suddenly shuts down - When we start with load on. The sag becomes very great because the belt is not pulled around tail pulley in time, The Belt then strikes different things, some of which are parts of the building & cannot be removed. The result is that we have all kinds of devices to obviate it, & in some of the belts nothing can be done except unload the belt, which takes time, You can avoid this in your original design - We want capacity for room for a big sag so we do not have to continually take up the belt. These big belts if yours will want 40 ft ~~wide~~ slack at least,

Regarding the pump & aplan of motor drive on Conveyors - after running the new one for a

week on 104 mixing belt night & day with heavy load. We are compelled to abandon ~~the design~~ as it is now arranged that is with pinion underneath as we have no room to put a self-aligning bearing & also because we can never be satisfied ~~with~~ that the pinion is on pitch line. We are designing it so pinion is on the side and the width of pinion is to be 10 inches. The $4\frac{1}{2}$ width new pinion after the cracks cease being so even that the jaw had become serious. There is 900 pounds pressure on tooth.

When you receive this letter kindly acknowledge that you have received my letter #18 dated April 23-1902 and oblige.

[APRIL 24, 1903]

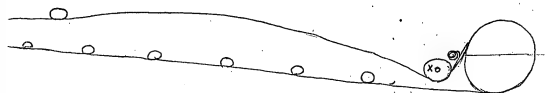
Simpkins -

London

(No 19 & this

Date it

WE have now got the right
thing to get bite on Conveyor belts
~~staple~~ on Conveyor 104. with
235 tons we can start the loaded -
belt from a state of rest. I have a
double shift running the moving
belts night & day so as to settle
once for all the flexible motor,
gears and bite of the belt,
The plan is this



X is the regular sized idler but with the heavy shaft. - The reason the grip on drive pulley is great is that the increasing arc increases grip in a far greater ratio than lengthening the space of free belt. The bearings run worn on the idler and the small diameter is severe on the rubber sides. We are making a 20 inch idler with the smallest of our regular self oiling bearings.

Edison

[ATTACHMENT]

#19.
Andréph.

note Duplain

I will sign as
making

From prints of the ~~the~~ fine
~~big~~ rolls I have just gone over, I find
some of the suggestions I have made in
my letter have not been followed out, and I
fear you may not have received ^{some} of
them, as I have ~~not~~ had copies made
of each letter, which ^{now} send you under
registered mail; - and I ^{trust} beg that you will
hereafter acknowledge receipt of each letter I
may write you.

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLI, LONDON.

Standard Construction Corporation Limited.

Fitzalan House, Arundel Street.

London, W.C.

No: 22.

May 2, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

No: 17.
I have your favour of the 18th inst. and note that you are preparing for me a full inspector's report and other records. I am not surprised at the trouble you have had with the shafts of the blowers; if I remember rightly, the bearings are about 10'6" apart and the speed of the blowers has been almost doubled from what it was originally intended to be. I have been working for some time on the drawings for our blowers and shall shortly send them to you and you will find that the bearings are about 7'10" apart, and the shafts 3 15/16, whilst an ample baffle arrangement is provided with an adequate fall for the material on to the first plate.

With reference to the gunny chambers, would say that in the Dunderland plant we shall not have any small gunny chambers. In every case where we have a motor, I have a large room varying in size according to the motor from 1500 to 3000 cubic feet, with plenty of room to get around and in every case arranged for free access of air from the outside. I have given this matter very

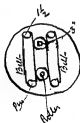
particular attention and as I am working out the designs under somewhat more advantageous conditions than with the Cement Mill I am able to arrange this work in a better manner.

With reference to the gears, I recollect that the face of the pinions on all motors driving conveyors on the Cement Plant is $4\frac{1}{2}$ "; with the Dunderland, all motors up to 30 HP. will have pinions 6" face, and those of 60 HP. 12" face which I consider very ample.

I do not anticipate any great vibration where we have to place motors in the roofs of the buildings as the whole of the structural work is at least $33\frac{1}{3}$ per cent heavier than at Stewartsville and besides being strengthened and specially braced where motors are carried; besides this, there will not be a single over-hanging gear in the whole of the plant.

With reference to the flexible couplings, I am sure we shall have to use one in connection with the 5 ft. crushing rolls and the Fine Grinding Rolls, and I shall look around and see the many that are in use here and on the Continent and pick out the one I consider best, as our Directors do not think it advisable to use anything but standard well tried machines where we can do so.

I note your sketch of the flexible coupling and would say that I have seen one very similar at work here, but with this exception, that instead of the two rollers working against the outside of the tightened belt, they work between two belts, and this prevents them from getting away from their contact if there



should be a sudden stoppage of machinery, which you will see is decidedly an improvement.

I shall shortly send you the drawings of the whole of the hoppers, etc. in the crushing plant, blowers, etc.

With reference to men, would say that I have as many at work as can be profitably employed and have no fear of "getting into a hole" either mechanically or otherwise.

I note that you are changing your exhauster from the top of the dryer to the ground. It may possibly be well for me to do this and I will look into it, but as I have so much more room and a so much stronger building, it may not be necessary.

I had already made a note when with you in Florida as to the running to one side of the lower belts and have arranged to put the idler pulleys every 50 feet.

I have some of the bearings for the conveyor idlers now at work testing them, and so far as we can see, they are simply perfect. I shall shortly pack up one of these and send it to you for your criticism.

It may be interesting to you to know that we are about acquiring the lease of a piece of land and several buildings where we intend to establish a laboratory with crushing, screening, blowing and separating machinery, so that practical tests can be made of any ores, etc. coming in.

Trusting you are well, I am,

Yours most sincerely,

Wm. Sampson

Standard Construction Corporation Limited.

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Fitzalan House, Strand Street.

London, W.C.

May 5, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

I have your two favours of the 23rd ult. - one No: 18 and one without a number - and also your favour of the 24th ult. No: 19, contents of which I have carefully noted.

It seems to me as if we had anticipated you somewhat and I am very glad to know from your No: 19 that the increasing arc increases the grip on the head pulleys in much greater ratio than length in the space of the free belt. We made up our minds as to this some time ago and I mailed you a little pencil sketch showing my ideas. Whilst working out the structural details we have been working in these belts and started to use not less than 25' of free belt on our short 24" conveyor belts - increasing this length with the increasing length of belt so that we have as much as 30' in some of our belts. I enclose you a little tracing, copied from the one mailed to you before, in which you will see that we have arranged our first pulley carrying the lower belt next to the head pulley to be 18" in diameter in all cases and to be got up in such a position as to

T.A.N.2

give the greatest amount of contact between belt and pulley. For these 18" pulleys we are using 1 15/16 shafts and self-oiling bearings. I can however make these pulleys 20" if you think it preferable.

In my last letter I wrote you what we were doing as to the face of our gearing driving the conveyors, and from this you will see that we have also taken care to have a good width of teeth in every case.

I have received all your letters from one up to this which I am now replying to, both numbered and unnumbered, as per your list, and I see from my letter book that I have replied to all of these as well as writing you on numerous other occasions.

I have been looking at some conveyor work over here more particularly with reference to the unloading and handling of our coal, and I think if you will send to the "Steel Cable Engineering Co., 92, States Street, Boston" for one of their catalogues, you will find illustrated on page 13 a very good arrangement for a scraper conveyor wherein steel ropes and dust proof wheels are used. I call your attention to this, not that we are contemplating using anything of this kind but merely as a matter of interest.

Yours very truly,

Wm. Simpson

[MAY 11, 1903]

The Dundonald Iron Works Co -

Gentlemen

I have received complete Drawings for the five Crushing Rolls of the Dundonald Mill and approve of the same if alterations are made as to foundation and other details, ~~It would be well~~ as per memorandum below - These alterations are the

result of actual experience obtained on the same character of Rolls at the Cement Plant

please acknowledge receipt of this letter

~~It~~ I would like the final drawings with alterations made for filing away for future reference -

Memorandum

B-187 There should not be more than ~~one~~ one eighth of an inch between the plates one quarter of an inch is too much - The edges of the plates, that is the last corrugation will cause edge to chip off, sometimes this chip will be several inches long and one to one

2

and a half inch deep we leave off the corrugation at the edge so the ore cannot get hold of it to break the edges. Thus.

Leave space 3 inches long here

B-180 = Tap bolts all shake loose, the wire does not lock them, it merely prevents screws from being lost, the only way to lock them is by fitting sheet iron links from head to head - then use the wire -
Thus -

Leave 3 inches space

Regarding the nuts on bolts the same objection to the wire holds. The Millions of change conveyances received daily shakes every nut loose. Instead of a hole put in a slot extending down under head of nut & drive a taper sheet cutter in & bend over - the taper should not be too great & the thickness of the steel ~~can~~ considerable. This is quite a little job which can be done on final assembling but it is essential.

The oil drain at bottom should only have a pipe long enough to fasten the rubber pipe to, and the same should be locked - A long pipe breaks by momentum.

B-181 is all right.

*
* B-182 Putting thrust Collar on both ends necessitates precautions against Canting of Rolls which will produce a pinch - The precautions are that the ore shall be fed to the rolls evenly and that no segregation of ore take

place, that is to say that coarse ore will not go down the chute to rolls on one side and fine ore on the other. Otherwise 182 is all right.

B-183 - All right except locking with slot & taper Cutter which applies to the whole Roll. except perhaps the large Housing Galls at end which may be locked in another manner.

B-184. I am doubtful if we do not still need the key across the ways to hold the fixed shaft bearings in place, if it gets out of line with drive shaft there will be trouble. The concussions will strain tapered belts and draw the reamed belts. We have roll plate Galls on Regular rolls drawn so much that we couldn't get them out. It is almost incredible but nevertheless true.

B-253 - I have never yet used in a roll anything but a hammered iron shaft, & this under the advice of John Fritz of the Bethlehem ^{Steel} Iron Co. I therefore advise hammered iron shafts not that mild steel is not strong enough usually but on account of gradual crystallization under powerful and exceedingly minute concussive strains. Coupling on main shaft will slip no matter if it is forced on. There should be a countersunk plate & bolts. We have had serious trouble with ours here and even after riveting it has started the riveting. It is difficult to see where this thrust comes from but it is there and is very powerful. Otherwise B-253 OK -

B-254 All right, look out for warping after finishing. Our ways here sprung one sixteenth of an inch so Roll had to be dismantled & re-placed to prevent bearings pinching on the ways.

B-255 all right

B-256 all right.

B-257 Grooves after machining should be polished

Note - The standard outside the roll for internal
orling through long shaft should not be put on
board floor but on steel beam or foundation to
prevent jam -

B-258 The shaft cover plate will leak oil
with ^{out} lead or other packing

B-259 all right

B-260 All right

B-261 all right

B-262 Flexible coupling to motor

B-263 Must be a good job or it will be
sure to leak - use used drawing paper in joints

B-264 We had to increase diameter of shear bush to two inches as consequence of hammering the socket oblong when we had a smaller diameter and steel will be worse as it can flow. Should advise two inches as minimum with perfect fit. It is extremely essential. ~~NOTE~~ If you want to get a high average run each day that the shearing device should be made by the best toolmaker obtainable that the bushes should not be tempered too soft so edges will get rounded or too hard so they will crumble and the faces of the shear bushes should be perfectly flush with the plate & come perfectly together so that a perfect shearing device is had, then there will be no trouble. Are you satisfied that you have room enough between gear casing & shear to get the stub sheared bolt out easily. My experience is that the workmen never realizes how good a job this shear device must be & we then as a rule have to make it all over again -

~~267~~ The taper pin to bring shear plates together has proved a failure here, gets all battered up - on two occasions men forget to take the pin out - we use a mark

The shear pin clamp has also proved bad the sharp edge of the slot causes it to act as a pipe tap, we have rounded the edges of slot but its not ideal -

Regarding the gears. The strength is alright but the pressure is very heavy for a 200 HP rate the pressure is 2100 pounds for drawing + double this for shearing - It is not a question of strength so much as wearing surfaces. If gears were theoretically perfect + we always got rolling friction etc it might be all right but we don't get it. The ~~etc~~ The speed + pressure here are very great and the wear will be proportionally great, another thing is that we have cast gears.

The gears should have a minimum face of not less than sixteen inches + I believe

Eighteen inches would be much better, they may look strange but that is no reason they should not be used. The gear body could even be lightened because its not a question of strength so much as wearing surface.

On the Spring rolls only a small part of the work or stress goes through the gears. Both rolls are practically driven direct through the medium of the ore, the gears preventing slip & consequently wear on the plates, and in the case of the regular rolls without springs the gears do not transmit one quarter of the stress & besides require very much less power, but on the fine grinding rolls the whole of or great power goes wholly through the gears. hence the gears should be all out of proportion to the gears above mentioned. You can make no mistake by using an 18 inch gear & in my opinion make a serious one by using 12 inch -

The jar of these gears makes it absolutely imperative that a flexible be interposed between the motor & the drive otherwise the jump of the brushes and sparking will be prohibitory.

B-265 I recommend the use of a regular Engine piston & snap ring. The relief hole at tail end should be widened to half inch - provide a steam pipe in contact with cylinder to prevent freezing in the center -

B. 266 & 267 - It is very desirable that ropes already spliced shall be in readiness, it is difficult for men to splice or mill or desirable that it be done outside or brought in - with the tightener requiring it will be difficult to do it without you make a change there.

The position of your tightener does not permit of a clear separate room ~~etc~~ but I suppose you contemplate making the room so the

air cylinders will be in motor room & the
ways air roll room - The It will not do to
have ropes run into motor room unprotected
as the air movement due to moving rope brings
in lots of dust. You cannot be too particular
with this partition to keep out dust. We use matched
pine then cover with ten cent canvas & paint
the Canvas.

Will not your rope strike foundation when
starting up -

B - 169 all right

B - 176 all right

C - 116 These rolls should be made solid
there is nothing gained by hollowing out
& there is a real danger from chipping off
edge for the reason that sometimes the
rolls will Cant,

C-139 - C-140 Is decidedly objectionable
 The maximum throw of the housing will not be
 less than one sixteenth of an inch & sometimes
 more. The gear bearings would not work at
 all. You should have cast iron girders
 at least thirty six inches wide well ribbed
 up in direction of throw and about two
 feet deep at the foundation & ~~are~~ somewhat
 bellied in middle have a foot on the girder
 where it rests on the foundation say four
 feet wide & well secured by bolts to a very
 massive foundation the greater the mass
 the better. If this is done the housing
 throw may be reduced down perhaps
 to one sixtyfourth of an inch & your gear
 bearings will work all right.
 No one can realize what these throws are
 until he sees the rolls doing work.

C-141 all right

C-142 all right except as to width

C-143 Forced coupling uncertain advise
increased plate & bolts - Water shaft has
flexible

C-144 All right -

B-175 All right - except that you may have
trouble in getting out plate bolts, they will be
known - Mandril will move & advise pinning
in addition -

B-186 - all right →

Yours very truly

"Copy"

Letter No. 19.

May 11, 1903.

William Simpkin, Esq.,
London, England.

Dear Sir:

From the prints of the five rolls I have just gone over, I find some of the suggestions I have made in my letters have not been followed out, and I fear you may not have received some of them, so I have had copies made of each letter, which now send you under registered mail, and I beg to ask that you will hereafter acknowledge receipt of each letter I may write you.

Please note that the suggestions made are the results of the actual experience we have had and are having at the Cement Wks., and I fully believe if they are carefully considered will save your company from the loss of considerable time and money when you start in operation.

Yours truly,

Edison

Number the Sellen #20

May 15 1903

Simpkins -

I do not remember that I told you
how we finally arranged our Motors for
driving the Blowers - We have it as in
Sketch 601 *

We use wooden wheels 18 inch on
Motor drives and 36 inch on Blower
shaft, 45 degree grooves and ^{one} inch
rope - This gives us a maximum speed
of 200 Revolutions & for slowing it down
we put a Regulating Resistance in the
Main line leading to all the armatures
with Blowers it regulates all right
which is not the case in any other
instance, probably because there is
no friction load - ^{or with friction} With very dry ore
it requires 160 with wet ore 200 Rev
The bite of the rope in the grooves is so
great that it will ~~not~~ ^{smoke} a block of

See sketch letter of May 8

wood held on 36 inch wood wheel at
the rim - thus varying the speed -

We make a Concrete foundation ~~on~~ two
first deep 18 inches below earth floor +
6 inches above as per sketch NO 2

This foundation reaches from one motor
to the other two motors being included
in one gummy chamber =

We use self-oiled bearings + the ~~size~~ ¹⁶ inch
wheel + bearings are outside of gummy
chamber; Where shaft goes through
there is a loose wool packing see sketch

NO 3 The door is self closing
having a weight on end of search cord
but connected to cord through a spiral
spring to take mass shock off =
Cord runs over single sheave block

The door has weather proof strips
being a rubber tube it closes it perfect ^{indep.}
door has stood 7500 full openings

+ at end of experiment was light as
all right - We use hard wood around
doors - Also we use three thickness
of gunny for Chamber + single thickness
for the outside. The 3 thickness are put
together. We had to do it as the float
came through + makes bad motor sparking
slapping on the commutator. By making
Chamber larger its all right.

We use a vestibule where we can
to prevent dust getting in when
inspectors ~~comes in~~ in - ~~The~~ The roof
is of matched pine then covered
with Canvas + painted -

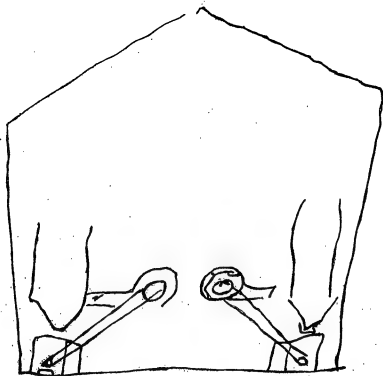
They are very substantial + perfect in
every respect. We have now a
perfect brush holder + Carlond
Bergmans brush holder was a bad
failure + the Carlond he told us
to use were no good - We are getting
low heat results below what he even

4

Claims - I have sent official approval of fine grinding & dressing Rollers to the Co. for record. There are some few changes that should be made. I will send you a pinion from 25-HP Motor on Conveyor which has run 43 days. You will see how inadequate the wearing surface of such a pinion is for that amount of power. We are cutting all ours Eight inches for 25 HP & 12 for 50 HP. We put pinions on side of gears & raise all motors up using a small A frame for pinion shaft which has self oiled bearings - This gives us a good Cast iron casing where we can use Crusher Oil - We are changing 34 drives this way - ~~Comp~~ -

Edison

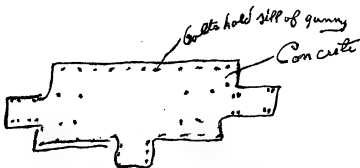
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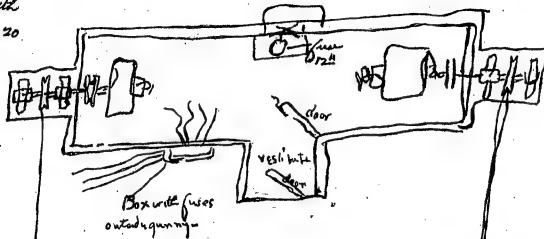
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N02

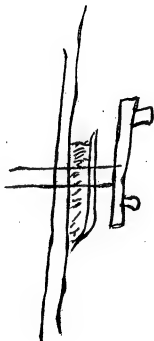


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Letter # 20



"copy" with
letter #20

N03



"Copy"

May 18, 1903.

Dunderland Iron Ore Co.,
Fitzalan House, Arundel St.,
London, England.

Gentlemen:

I have received the drawings for the five foot spring rolls and approve of the same if the alterations suggested are made as per following memorandum.

Memorandum.

B.230. The throw of this roll will be tremendous on account of its weight; the girder is entirely inadequate as I have stated in two of my previous letters. I am very sorry that you could not have seen our 36 Roll in operation, you would realize what I mean by entirely inadequate. We have now put all our supporting beams in solid concrete. This of course will do away with the elasticity of the beams which tends to save the pound of the housing. It will now be very severe and we intend to put about one inch of rubber in for the bearings to strike against, protecting the rubber from oil as far as possible. I advise that you change your girder to a box girder.

B-127. B-211. Our filter oil cup with the gauze wire filter is very successful but the concussions broke the cup off and also the gauze cup being only soldered at the top broke off by momentum on stopping and we had to take cups off of bearing of rolls and connect by a

#3 D. I. Oil Co.

rubber tube. This is very undesirable and defeats the object of the cup, which was to forever insure the bearing against grit getting in, as the men disconnect the tube and leave it open for grit to fall down from floor above and get into the bearing. I have a new cup in which the gauze cup is supported at top and bottom and the cup itself is supported by an iron frame bolted to bearings. If you put the oil cup on top of the tube on B-127, it will break off within an hour without it is braced at the top. What is wanted is the gauze filter cup inside and a part of the bearing. The gauze cup being supported at top where it is soldered and at the bottom. Could you not put filter in cup on B-127 and still have it convenient?

B-232. There should be a flexible inserted between motor and roll drive on account of the inevitable throw of the housing and rolls on even the strongest box girder, the shafts having no wobblers will not work, it will heat up badly. To stop this you will have to use the wobbler on both shafts. If the throw at the rolls and drive gear supports could be made the same, possibly the second wobbler would not be needed, but I think this is impossible.

B-173. Think shear bush should have a minimum diameter for the reason given on report of fine grinding roll. We use for shearing pin on our 36 Rolls nine sixteenths, so you better start with this size. How about room between gear casing and shear disk to get your shear pins out. Same trouble with shear pin clamp as reported on fine grinding roll. Grease cup for oiling gear will jar off if not fastened well.

B-169. O. K.

B-196. O. K.

#3 D.I.O.Co.

B-195 O.K.

B-197. O. K. except roll extension shaft ought to be changed to wobbler connection for reasons mentioned.

B233. B-234. Will the end chuck hold on the roll shaft without backing off, regarding this form of wobbler if it ^{is} proportioned right I suppose it will do the business.

B-172. O. K. Joints should be packed with paper or equivalent.

C-115. O. K.

C-133. Use pine instead of maple. Have spoken of this in three different letters, which makes me think you must have missed some of the letters. See remarks about block of rubber to take shock in addition. Otherwise O. K.

C-120. O. K.

C-121. O. K.

C-118. O. K.

C-132. O. K.

C-115. The plug hole useless set by a mark. See report on fine grinder. Start the shear pin nine sixteenths. Otherwise O. K.

C-134. O. K.

C-112. O. K.

What is object of having the key seat in bottom of all the bearings 3 inches by 5/8.

#4 D. I. O. Co.

B-128 O. K.

D-228 O. K.

B-129 O. K.

B-130 O. K.

B-212 O. K.

B-229 O. K.

B231 O. K. except regarding safety of the forced coupling for wobbler.

B-227. O. K.

B-232 O. K.

B-195 O. K.

Same remarks about locking of stud bolts as given in report on fine grinding roll.

Yours truly,

Thomas A. Edison

ALL LETTERS SHOULD BE ADDRESSED:

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLI, LONDON.

Standard Construction Corporation Limited.

Fitzalan House, Arundel Street.

London, W.C.

No: 24.

May 19, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

Acknowledging your letter No: 19 of May 11th (I also received a No: 19 of April 24th) would say that I am going carefully over your previous letters, all of which I have received as per my letter No: 23 of May 5th, as I am under the impression that we have carried out all the suggestions which you have made which are pertinent to our work.

The fact is that we are not doing a single thing without giving it the fullest consideration from every point of view and taking advantage in every way of all the suggestions which you from time to time have so kindly given us.

Also we are watching carefully the manufacture of every piece of machinery and shall continue to do so, as we wish to have this plant erected in a thoroughly mechanical manner so as to obviate as much as possible any trouble except what one always has with the starting up of a new concern.

2.

I am going over to Norway in the course of a few days
so as to see what can be done as to preparing for our excavations
and foundations, and will write you fully on my return.

Yours very truly,

Wm. Simpson

W.
Standard Construction Corporation Limited.

FITZALAN HOUSE, ARUNDEL STREET.

Amberley House, Norfolk Street

TELEGRAPHIC ADDRESS:
"STANCOLLI, LONDON."

London, W.C.

20th May 1903.

Mr Thomas A. Edison,

Edison Laboratory,

Orange, NEW JERSEY, U.S.A.

Dear Sir,

file
The Dunderland Iron Ore Company have handed us a letter addressed by you to them, dated the 11th May, on the subject of certain of the Dunderland mill drawings.

We thank you for your valued observations, and have requested Mr Simpkin to reply to your letter on its technical features.

Yours faithfully.

STANDARD CONSTRUCTION CORPORATION LTD.,

W. H. A. P.

Secretary.

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Standard Construction Corporation Limited,

Fitzalan House, Arundel Street,

London, W.C.

No: 25.

May 20, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

file

Your favour of the 11th inst. with reference to the Fine Grinding Rolls (which you evidently addressed to the Dunderland Iron Ore Co. in error) has been handed to me and carefully noted in every instance.

Final drawings will be sent to you for filing, as requested. In this connection would say that I have decided wherever it is possible to use solid forged couplings so that there can be no possibility of slipping.

Yours very truly,

Wm Simpson

Standard Construction Corporation Limited.

ALL LETTERS SHOULD BE ADDRESSED TO:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANGOLLI, LONDON.

Fitzalan House, Abchurch Lane,

London, W.C.

No: 26.

May 22, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

Herewith please find print A.172 which is a skeleton drawing of the bin below the Giant crushers as far as the first set of rolls - changed in every way according to our conversation when I was in Florida. The details we will send you later after they are completed.

Yours very truly,

Wm. Simpson

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Standard Construction Corporation Limited.

Fitzalan House, Arundel Street.

London, W.C.

No: 28.

September 4, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

Since my return from Norway, and later from Stockholm where I was sent by the Dunderland Iron Ore Co. to join Mr. Ballantine and Prof. Louis in an investigation of the Grondal furnace, - this is the first opportunity I have had to get together and mail you a lot of prints.

Before leaving for Norway I sent you a skeleton drawing of the bin, etc. underneath the giant rolls in which I embodied all the changes and suggestions which were talked over whilst I was with you in Florida.

I am now sending you the details as follows:-

A. 172. 176.

B. 269, 270, 289, 290, 291, 292, 293, 297, 299, 300,
301, 304, 305, 306, 307, 308, 309, 310, 311, 312, 313, 314, 316,
317, 318, 319, 320,

C. 135, 316, 137, 146.
in all 33 sheets.

Crusher piers, A. 160.

T.A.E.2.

Drawings screens, etc. A.124, 149, 150, 174, 175, 177.

B. 203, 204, 205, 206, 207, 208, 209, 210, 277, 278,
279, 280, 281, 315, 321.

Drawings of Blowers - A.176, 179. B.322, 330.

Diagrams of general lay out, and also of all the
buildings, head and tail pulleys, etc. -

A. 125, 126, 131, 132, 133, 134, 135, 137, 138, 139,
140, 141, 153, 180.

B. 217, 218, 219, 220, 221, 222, 223, 224, 225, 226,
235, 240.

Also drawing A.193 which is the skip for carrying up
ore: B.342, the skip car.

✓
With reference to this skip, you will note that I have
drawn it out somewhat lighter than we had talked about as I
have seen some skip cars almost similar in design and they are
lined on the sides and bottom with $1\frac{1}{2}$ " hard wood planks which add
very considerably to the life of the car.

Awaiting your favours, I am,

Yours most truly,

Wm. Buntin

The blower matter was thoroughly gone into with Ballantine, who
made a lot of experiments at Orange, & we are continuing these
here. S.

Standard Construction Corporation Limited.

Fitzalan House, Avonmouth Road,

ENGINEERING DEPARTMENT.

TELEGRAPHIC ADDRESS,
"STANGOLLI-LONDON"

London, W.C.

Sept 8. 03

Dear Mr. Randolph

Thank you very
much for your letter about Mr.
Edison's eyes. I am writing him
quite an epistle which goes by
this mail - kindly see it reaches
him & if he is at Stewartsville
please forward it & greatly
oblige. With my best wishes.

Yours most truly
Wm. Simpkin

Standard Construction Corporation Limited.

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Fitzalan House, Arundel Street,

London, W.C.

Sept. 8. 03.

Dear Mr. Edison

Mr. Rhodes has just been in and shown me a letter from you. I thank you very much for your kindly words, but for the life of me I cannot understand your apparent lack of confidence in my ability to carry out this work to a successful issue. Since I have been here I have had but one purpose in view - to carry out your wishes with regard to this Plant and to make it a success. Since the days we first laid out the preliminary drawings and decided on the general arrangement, up to this moment, not a thing has been changed by me where any principle of your system is involved and I have taken particular pains to embody your suggestions. It has been my constant study to keep it an absolutely "Edison" plant & I have refrained from and argued against any attempt to have introduced modifications suggested by others. In fact at times I have had to be very stubborn & unpleasant. In a score of letters I could not begin to tell you how I have had to stand up against "Boulting Thomases" & on behalf of you & your system. Confidence begets confidence and just when I had the biggest doubt

Standard Construction Corporation Limited.

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Fitzalan House, Arundel Street.

London, W.C.

full into line, here comes a letter from you, throwing doubts on the very one that did you know all which has taken place since my arrival here - you ought to stand by. You said "stick by me & I will stick by you" & this I have faithfully done & am doing. You seem to think I have had no experience in crushing &c. I have never claimed any experience of your system other than that gained whilst with you, but I think to-day I possibly know more of it than anyone else outside of yourself. That I have a good knowledge of and had a considerable experience in both crushing, fine grinding, screening & conveying goes without saying & I can point with pride to several plants which to day are successfully working. On my return to this country after an absence of over twenty years I went to see a large elevating & conveying plant designed & erected by me, and which is still doing good work. I feel that I am able to hold my own with most engineers in this particular line & I know I have had an experience, always practical, second to none. I cannot at all understand how it comes you have not in your possession a set of the Giant Roll drawings, as my mailing clerk's book shows they were sent to you,

Standard Construction Corporation Limited.

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Fitzalan House, Aundel Street,

London, W.C.

Besides this we discussed a many features of them when I was in Florida, going into prices &c. which I confirmed by letter to you on my return here - Ap. 22.08. However I will at once have another set of prints made & mailed to you. I did not send you the Bryer drawings as they were all made before I left the Laboratory and are an exact copy of that at Stewartsville - as also the Distributor - core having however been taken to shorten each screen plate & to put in plates instead of angles at the lower end of each screen plate, as per your wishes, and as seen by me at Stewartsville so far as the change from angles to plates is concerned. I mailed you on May 22 a skeleton drawing A172 of the bin &c under Giant Rolls embodying all the changes & suggestions as made by you when I was in Florida - not receiving any acknowledgement of this letter or print I have detailed the whole of it on the lines as set forth, and these details have been sent to you. On June 2nd as I wrote you I left for Norway - returning here July 5 - leaving again on July 8th for Sweden at the request of the Sunderland Co. to join Prof. Louis & Mr. Wallentin who had been sent out whilst I was in Norway to investigate the Grindal system of Briquetting - I had hoped to

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ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Tilgatan House, Arundel Street,

London, W.C.

Keep out of this at least until I could talk matters over with you, but the C^o took the matter up and I had no choice but obey instructions. At this time I will just say that most successful briquettes were produced, several tons of which have been sent to Consett where they have been used & the verdict is favorable. I will shortly mail you a full description & when you see Prof. Louis' report, having in mind his previous report on "Magnetic Separation" - in which you wrote "Simpkin read this then see me it is dreadful" - you will have an idea what I mean when I say I have had to stand up & fight for you & your system - or we would have had "Grondal & Louis" all through. I returned to London on July 19th and since that time have been very busy attending to various matters. The other day I wrote you that we were mailing you a lot of prints and no doubt most of them if not all have reached you ere this. My time is absolutely all taken up & this job is no "cinch" for I discovered if I did not take over the whole business our estimate would be away off. The first attempt to send out prints &

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TELEGRAMS: STANCOLLI, LONDON.

Fitzalan House, Arundel Street,

London, W.C.

+ specifications, getting in bids on a given day, then opening them in solemn conclave which is the custom here showed me we would be in the long damp grass very soon - so I said all the bids were too high and I asked the Board to appoint a Works Committee + let me handle the getting in of prices + place them before the Works Committee with my recommendations - this was done and I am very pleased to be able to say to you that up to date all contracts made are well within our estimate - but all this has not been done without considerable hard work on my part which I did not expect to have to take up - I think however you will agree with me that it will be an extra "feather in your cap" if we can carry out + start this plant within the estimate. Please do not think for one moment my hat does not fit - I am just the same old dollar bill + just as fond of my work as ever - first here in the morning + last to leave at night + keeping everybody around me up to the mark - Do not think it is all "ego" with me, it is not, you have been always put foremost by me

Standard Construction Corporation Limited.

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STAMCOLLI, LONDON.

Fitzalan House, Arundel Street,

London, W.C.

as it is my pleasure as well as my duty. I am not seeking notoriety as our friends "Ho. Roberts & Co." do at every move - see American, English & Norwegian papers. I am willing to carry the message to Garcia & shall be more than content if at the completion of the work I have your commendation. Now what I want to ask is that you show a little more confidence in me & try & get it out of your mind that I am trying in any way to supersede you in this work - I assure you that I am not doing a thing that you will not approve when you see the Plant in operation. I am using judgement in everything, weighing everything carefully & not pushing headlong. On my last visit to Stewartville to go over the plant with Mr. Jayne at your suggestion & make notes of all "bugs" & "changes". I left a little puffed. A certain gentleman who seemed to have charge of the drafting had three or four draftsmen in the office ready to start work, whilst others who had been on my staff & with Darling were also about. I was polite enough to say to this gentleman that I had discussed

Standard Construction Corporation Limited.

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Fitzalan House, Arundel Street,

London, W.C.

a many things with you + should shortly mail some drawings embodying all we had talked about for your approval - He replied with a loud voice + with a cynical laugh, looking around the room for approval - "Oh wait until I get the drawings Bill cut them up" - which of course was particularly nice + pleasant for me - + gave me the very comfortable feeling that my drawings "would not be understood" - Whilst I don't want to criticise the gentlemen I must ask you kindly in future to take up my work yourself + let it be a matter between us - + trust me to take care of all the little details - What will be the outcome of your letter to Mr. Rhodes I don't know. He went post-haste to Barnow-in-Furness where the Steel Institute was holding a meeting + saw Sir David Dale, Mr. Ainsworth + Mr. Williams, and all four have combined in sending me word of their unabated confidence in me + my work. I shall look with interest to your reply to this somewhat long communication - I would also like you to tell me how matters are going at the

Standard Construction Corporation Limited.

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Tilgatan House, Strand Street.

London, W.C.

Cement-Plant. I hear the Battery is now on the market
+ I congratulate you. My people here are discussing all
sorts of schemes + I am continually making estimates
on Road or Dry Crushing, Cement Plants &c. &c.

With the utmost esteem + best wishes.

I am yours most truly

Wm. Simpson

Standard Construction Corporation Limited.

Fitzalan House, Strand, S.W. 1.

ENGINEERING DEPARTMENT.

TELEPHONE NUMBER,
"STANGOLLI" - LONDON.

London, W.C.

Sept. 6. 03

4.30 p.m.

Thomas A. Edison Esq.

Dear Sir

A great many of our people come in here to see me & discuss progress and prospects. The fact that we have not been able to tell them the Cement Plant is successfully running has caused some to ask very awkward questions, and at the meetings of our various companies which I am bidden to attend I am often asked very pertinent questions. My answer is always to this end "Mr. Edison knows what he is about and there are a many things connected with this process somewhat

puzzling to even engineers unless they have particularly studied the work, but you may rest assured it will be a success." I say the same thing to those who call & my unwavering faith in both you & our undertaking has worked wonders. I think it will be well for you to tell me occasionally about progress at the Cement works - you can trust me to handle any information you may give me to your interest. I am so pleased to hear from Randolph that the newspaper articles about your eyes were "to say the least" exaggerated. I hope to make a trip & see you soon after Christmas & then we can discuss a many things & probably you will feel, after our talk that possibly you have

been mistaken & Simpkins is an Edison man -

Yours most truly

Wm. Simpkins

A stylized handwritten signature, likely of Wm. Simpkins, consisting of a large, sweeping initial 'W' followed by a smaller 'm' and a final flourish.

Standard Construction Corporation Limited.
Fitzalan House, Strand, Street.

ENGINEERING DEPARTMENT.

TELEGRAPHIC ADDRESS:
"STANDCOLLY-LONDON"

London, W.C.

Sept. 9.02

6.15 p.m.

Thomas A. Edison Esq.

Dear Mr. Edison

I am just in receipt of a notice asking me to attend a meeting of the works Committee on the 23rd inst. to discuss the "Poniquetting Scheme". From my to-days letter with reports you can judge pretty well of the situation & I think now is just the time - if you so desire - to assert yourself & also show that you have some confidence in my ability & integrity of purpose. At any rate it will not do to give Louis & his gang a foothold. He

is now trying to press on us some fellow to assist with the Magnet work - saying he has "such a fine touch" &c &c - & I must oppose him, if I am to be loyal to you & to myself. He does not know the first principle of our work & lays hold of the veriest straws if he thinks it will help him. What he says to the Committee in my absence I don't know - but I am beginning to know the man & can read him like a book. When you get this - if you feel as I do about it please cable the Dunfermline Co. so the meeting may be before the 23rd if it should turn out. To suit some of the members better - they have a happy way of changing dates at a days notice - Please cable either that you approve my report &c

re brigetting - or advise the Co to leave the brigetting
matter in my hands - I can then lay the whole scheme
out & submit it to you - I have thought it all out
& whilst we have a very ugly piece of land at the
site selected I think I can get it in all right -
Anyhow you want to help me to kick off the
Lewis crowd & this will do it & I think for good -
Am writing in haste to catch the mail train -

Yours most truly
Wm Simpson

The Committee consists of

W. Rhodes - who is your great admirer & my friend

Amisworth

Williams

Mason

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Fitzalan House, Arundel Street,

London, W.C.

No: 29.

September 8, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

When Mr. Dick was here a short time ago, and soon after the matter of briquetting had been discussed by our people, he told me that he was writing you with reference to the same and asked me to send you as soon as possible full particulars of the Grondal process which it seems our people have decided to adopt.

I went over to Sweden several days after Prof. Louis and Mr. Ballantine had arrived there and had an opportunity to investigate carefully one of their furnaces which was at work, and another which was under construction.

The furnaces are simple tunnel furnaces of the ordinary type and differ very little from the furnace which you were building at the Laboratory in general design excepting that the crown of the furnace is brought down within a very short distance of the briquettes on the car passing through, and that producer gas is used for fuel instead of powdered coal.

T.A.E.2.

I enclose you exhibits A.B.C. and D. which will put you abreast of the position of affairs at present.

'A' is the report of Prof. Louis and if you will read this carefully you will see that he has gone entirely out of his way making suggestions, etc., as he has I believe in all other reports of which copies have been sent to you but more particularly in his report on the magnetic separation which you will very well remember.

Exhibit "B" is Mr. Ballantine's report which is somewhat more to the point.

Exhibit "C" is the Minutes of the meeting of the Works Committee which was held to consider these two reports. I may say at this point that when I arrived at the meeting it was very evident to me that the whole matter had been discussed with Prof. Louis in the north before the members of the Committee came up to London, and that their minds were pretty well made up as to what they would recommend. This being the case, I had very little to say as I intended to look somewhat further into matters before agreeing with their recommendations, and this resulted in Exhibit "D" which is my report as you will notice under date of August 31st is much later than the others.

Since my report has been sent to the Committee I have had no indication from them as to what they intend to do in the matter, but I am pretty well satisfied that they will eventually carry out my suggestions as to leaving out this extra set of rolls which I do not consider at all necessary.

T.A.S.O.

I am sending you one briquet which was made amongst many by the improvised press and afterwards passed through the Grondal furnace, and I think you will agree with me that it is a very fair sample of what a briquet should be. This contains about 70% hematite and 30% magnetite and no added fines - of this I am perfectly sure.

The whole of the briquettes made were just as good as this one but those made with the Grondal press were not in any way equal to the one I send you.

I have gone carefully into this business and if we are to adopt the Grondal furnace I am satisfied we must also adopt another press, other than that used by the Grondal people - which is a very crude affair at the best - and it is for this reason that I have recommended to the Board the adoption of the press made by the Mould Co. of Pittsburg - Exhibit E.

This press will I think make the cylindrical briquet or it will make the size and shape as recommended by the Works Committee, and whilst I am perfectly satisfied that we can handle these briquettes automatically if made of a cylindrical shape, I agree with the recommendations of the Committee that we go slowly on this point and put in presses to make the 6" x 5" x 3" briquet which will have to be removed by hand to the cars.

I know the Mould machine very well and have seen it in use in a great many places, and to my mind it is so much the

T.A.E.4.

superior of any other briquetting machine which we can purchase that I had no hesitancy in recommending it to the Board.

There are quite a number of briquetting machines made in this country and in Germany which I have investigated but I do not think that any of them can come up to the one recommended in any way.

Whilst waiting for the decision of the Company as to whether or no they will adopt the recommendations of the works Committee, I am making a general lay out which I think will be best and after I have got it into proper shape I will send you a print.

After you have gone over these several enclosures I wish you would write me what you think about it anyway. As this is not your briquetting scheme, I was in hopes that I might have been left out of it entirely and that it would have been turned over to the Gröndal Engineer, but when I found the way things were going, as usual I stuck my finger in the pie and this is the result.

I should say that quite a large number of briquettes were made of the Dunderland ore - both by the Gröndal press and by the press improvised by Mr. Ballentine - and there is no comparison between the two as the briquettes made with the improvised press are so much superior to the others. Quite a quantity of these briquettes were sent to the Consett Iron Works and the report of the Works Manager and the Chemist is very

--A.B.5

gratifying, in so much so that all the worries which our people
have had with respect to getting out a satisfactory briquette
seem now to be set at rest.

Yours very truly,

Wm. Simpson

[ENCLOSURE]

A file

Report on the Grondal System of Briquetting.

The DIRECTORS,

Dunderland Iron Ore Co.

Gentlemen,

In accordance with your instructions, I again proceeded to Herrang, in company with Mr. Bullantine, to conduct a further series of experiments upon the Grondal system of briquetting, which process I have described in my report to you dated April 23rd last.

The Grondal process properly speaking consists essentially in making briquettes of iron ore without any binder except water, and firing the briquettes thus made in the long tunnel-like furnace, drawings of which accompanied my report already referred to. The material experimented on consisted of Dunderland Specular iron ore and magnetite, mixed in various proportions ranging from about 10% of the former and 90% of the latter, to 90% of the former and 10% of the latter. All these mixtures gave practically identical results, and it would seem that specular ore is just as easy to briquette as magnetite, although it may possibly require a slightly higher temperature. Experiments were tried with briquettes made in two ways, namely, in the drop press previously described, and in a press improvised by means of a powerful screw jack, which made a briquette 3 in. in diameter, nearly 4 in. long, and weighing about 3 lbs. The pressure exerted in making these briquettes was probably about 2 tons per square inch, and the briquettes made in this way were rather better than those made in the drop-press. In both cases, however, a briquette was produced which would perfectly well stand handling (before going into the furnace) but which was too tender to admit of automatically charging upon the cars.

[ENCLOSURE]

About one ton of Dunderland briquettes was made altogether in various ways, and all of these were quite satisfactory, the resulting briquettes being strong and hard, and showing no tendency to form fines. A briquette taken from the furnace at a red heat could also be thrown into a bucket of water without disintegrating. The briquettes produced (about one ton) have been forwarded to the Consell Iron Ore Company, Ltd. The furnace worked well and economically; when working on Herrang magnetite, it turned out in regular work a car of briquettes, weighing about 15 cwt. every half hour, with a coal consumption in the gas producer equal to 3.75% of the weight of briquettes burnt. Allowing at the much higher rate of 1 cwt. of coal per ton of briquettes, and taking the coal to cost 10s. per ton at Dunderland, the cost for fuel will amount to 8d. per ton of briquettes. The channel beneath the furnace was always fairly cool, the furnace lost but little heat by radiation, and the temperature of the escaping gases, as also of the issuing briquettes, was about 160° C. There is therefore but little heat lost, the chief consumption being probably that required to evaporate the water in the raw briquettes (amounting to about 7.5% of the weight of the ore). The temperatures attained were measured by means of Seger cones, which showed that a heat of 1400° C. was readily obtainable. The furnace is not expensive to build and should cost but little for repairs; it thus evidently answers all requirements. It must be remembered that the furnace at Herrang is intended for calcining, so as to remove sulphur, and not merely for burning briquettes, and hence works relatively slowly. I found that Dunderland briquettes can, however, be burned perfectly when drawing cars at the rate of one every quarter of an hour, and have no doubt that equally good results could be obtained by drawing at the rate of one every ten minutes, if Dellvik water-

[ENCLOSURE]

gas or producer-gas, rich in hydrogen (such as made e.g. in the Taylor or any other producer worked by a steam jet), were employed instead of ordinary producer gas. Such gas gives a higher local temperature and would therefore be preferable for the manufacture of briquettes. A car of drop press briquettes (6" x 6" x 3") of Dunderland ore will carry two layers each of 12 rows of 7 briquettes, and as each briquette weighs about 5.5 kilos, each car carries close upon one ton of briquettes. For a large output multiple tunnel furnaces would be best, a 6 tunnel furnace forming probably a convenient unit. Such a furnace would be about 33 ft. wide and 165 ft. long. Assuming each tunnel to burn a car carrying one ton of briquettes every 15 minutes, this unit would burn about 500 tons per day, so that 6 such units (5 in action and one in reserve) should suffice for an output 2500 tons of briquettes daily. The width of car now in use has been adopted so as to enable the workmen to place the briquettes upon the car, working from one side only. If presses were arranged along both sides of the car track, the cars could be made wider, say about 5 ft. thus making a better furnace, and allowing a 4-tunnel to be substituted for the above 6-tunnel unit. Such a unit with cars taking 12 rows of 12 briquettes each arranged diagonally as at present and with two tiers on each car, would turn out rather over 25 tons per hour. As each press makes 10 briquettes per minute, 8 presses will be required for each unit, these being conveniently arranged in two groups, each supplying a pair of tunnels, and being arranged by twos on either side of the car track; the pair remote from the furnace would make briquettes for the lower tier, and the pair nearer the furnace those for the upper tier. Each unit would then require 8 men per shift at the presses, 2 at the charging end and 2 at the delivery end

[ENCLOSURE]

of the furnace. Allowing one man at the gas producer and 1 man at the mixer, assuming that three shifts are worked and that wages average 3 kr. per day, wages would amount to about 3½d. per ton of briquettes. Each press is stated to require 3 HP. so that allowing for the haulage of the cars a 30 HP. motor would be required for each unit, corresponding to a coal consumption of say 30 cwt. of coal daily, or but little over ½d. per ton of briquettes. The total cost of fuel and wages would thus be about 9½d. per ton, to which must be added the charges for wear and tear, repairs and management; no data are available for estimating these, but it seems safe to assume that the total cost of briquetting by this method should not exceed 1s. per ton.

By the employment however of a powerful briquetting machine working by pressure and not by a blow, i.e. a press actuated by mechanical leverage, or by hydraulic power, it seems possible that a briquette may be produced firm enough to bear transfer to the cars by mechanical means, and thus to dispense largely with hand labour at the presses. I am inclined to think that a cylindrical briquette, 3 in. in diameter, and 3½-4 in. long, could be made with finely ground ore, strong enough to bear such treatment, by a pressure of 4 or 5 tons per square inch, or say a total pressure of 55 tons, but this is a point that will have to be determined by actual experiment with a suitable press. Our experiments at Herrang show that a car filled with such briquettes can be burned as thoroughly and as rapidly as a car charged by hand with the present form of square briquette, and that the fact of these cylindrical briquettes touching each other makes no difference to their thorough burning. All questions concerning the burning of the briquettes may now be looked upon as satisfactorily settled.

[ENCLOSURE]

That of the best form of press, and in connection therewith, of the best shape of briquette, and of the best way of transferring the same from the press to the car, still remains to be decided by experiment with various types of presses, -

My conclusion is that the Grondal method of burning Briquettes of Dunderland ore has been proved to be quite successful, provided that the following points are attended to, there being stated in the order of their importance:

1. Sufficiently high temperature. The temperature in the combustion chamber must never fall below 1300° C. and is best kept between 1350° and 1400° C. This can readily be secured by means of producer gas made with the injection of a sufficient quantity of steam, and with a properly proportioned furnace.
2. Fineness of the ore. The more finely ground the ore, the better are the resulting briquettes. I am inclined to advise that all the magnetite should be ground wet, and wet separated, as suggested in my previous report, and that the specular ore should be run through a pair of fine grinding rolls on its way to the sprinkler and mixer, which will feed the ores moistened uniformly with 7 to 8% of water, and thoroughly mixed, to the presses.
3. Sufficiently high pressure. As already indicated whatever shape of briquette and type of press may be ultimately adopted, the briquettes should be made under a pressure of never less than two tons upon the square inch; a machine working by steady pressure seems to give better results than a drop press, although quite satisfactory briquettes have been obtained by the use of the latter.

I am, Gentlemen,

Yours obediently,

(Signed) HENRY LOUIS.

[ENCLOSURE]

Copy.

August 4, 1903.

To
The CHAIRMAN and DIRECTORS,
Dunderland Iron Ore Co.,
Fitzalan House,
Arundel street, W.C.

Gentlemen,

Report on the Grondal System of Briquetting.

I arrived at Herrang with Prof. Louis on the afternoon of July 7th, and found the Grondal furnace in full working order running night and day. Owing to some difficulty with their fine grinding machinery they could not get enough "fires" to keep the furnace running to its full capacity, and they were therefore only passing half the number of briquettes through the furnace per hour than I understand they have been in the habit of doing.

As a plan of the furnace has already been sent to you, it is needless for me to go into details of construction, dimensions, etc. The press, as already described by Prof. Louis in his report, is a "drop press", making eleven briquettes per minute, each briquet weighing a fraction less than 10 lbs - the output being practically 100 lbs. of briquettes per minute, or 2.6 tons per hour. The briquettes are removed by hand from the press, and placed on edge on a car, 84 briquettes making one layer; the briquettes are placed two layers deep, 168 briquettes in all, or a total of 1680 lbs. per car. Usually a car is placed in the furnace every half hour, and at the same time, one is taken out, although when we arrived they were only putting in one car every hour for the reasons already stated. Whether a man would be able to stand at a press hour after hour and remove the briquettes as they are made for a full shift, is something of which I am very doubtful. It is more than likely that three men would be required for every two machines, so that using the Grondal press it would cost at least three pence per ton to place the briquettes on the car. The tops of the present cars

[ENCLOSURE]

are covered with common red brick, and to prevent the burning of the same a layer of concentrate is spread over the bricks each time the car is loaded up, which seems to me a very extravagant proceeding. Mr. Grondal however is arranging to put on fire brick covers which will overcome this difficulty which is common to all tunnel furnaces used for this and other purposes. The bottom of the cars in passing through the furnace remain practically cool so that there is no fear of their burning out. In my opinion, the economy of the furnace is first rate, the temperature of the escaping gases being 150 centigrade, and the temperature of the briquettes is about the same. This high rate of efficiency however could only be kept up by placing a car in the furnace every hour, as I noticed that when we forced the furnace and withdrew the car every quarter of an hour, the briquettes came out red hot. This however could be greatly reduced by lengthening the furnace as proposed by Mr. Grondal. The producer is charged eight times in twenty four hours, each charge being 180 kilos, or 2900 lbs. per twenty four hours.

Unfortunately Mr. Grondal had mixed up our hematite and magnetite concentrate together and had ground up about 80% of it to "fines" before our arrival at Herrang. As I shipped equal amounts of both concentrates (as instructed) this of course made a very high magnetite mixture, which on assaying proved to be 80% magnetite and 40% hematite. This I think was also due to the fact that the ore to make the "fines" was crushed in a ball mill and probably a big lot of hematite washed away.

We made several briquettes from this mixture, which are marked No: 1 and passed them through the furnace. They were four hours in the heat and looked first rate when they came out.

Briquettes marked No: 2 are from a mixture 42% magnetite and 58% hematite.

[ENCLOSURE]

Briquettes marked No: 3 are 45 parts magnetite and 55 parts hematite. These were in the heat two hours which is the usual time allowed for the Grondal briquettes. A quantity of the No: 3 mixture was taken and made into briquettes three inches in diameter and about 4 inches long by means of a "screw jack", giving a pressure of about two tons per square inch. These briquettes however were much too weak to stand automatic handling, owing to the want of pressure, but were strong enough to stand being piled one on top of the other to pay survey and as close as they would lie on the car. They were passed through the furnace and were in the heat the same length of time as Nos: 2 and 3 Grondal briquettes, and, as you will see, are certainly a good deal better.

Briquet No: 4 is from a mixture of 30 parts magnetite and 70 parts hematite, and No: 5 is a mixture of 10 parts magnetite and 90 parts hematite.

No: 5 I consider a most severe test as all the fine dust had been washed out of the ore and this, combined with the high percentage of hematite, makes a mixture to briquet which, according to former theories, would be impossible.

A quantity of No: 3 mixture was made into briquettes and passed through the heat in one hour which equals putting a car in the furnace every quarter hour. These briquettes are marked No: 33.

From the sample briquettes it will be seen that the high pressed ones are much better than those made by the drop press.

That added "fines" are not needed as demonstrated by No: 5 as the concentrate from which these briquettes were made had not half the amount of "fines" that our regular concentrate contains.

[ENCLOSURE]

That the length of time in the heat makes no difference providing the temperature of the briquetts has reached not less than 1350° centigrade, as proved by the briquettes No: 13.

That hematite makes just as good a briquetts as magnetite, providing the temperature in the furnace is all right, as proved by briquetts No: 5.

That briquettes can be piled one on top of another on the car previous to being placed in the furnace, providing they are made with a sufficient pressure to withstand the weight, as proved by Briquetts No: 3.

These experiments have only proved what I have always held, - that to make a successful briquetts, high pressure is of the first importance: that "fines", other than those produced in the regular grinding of the ore, are not necessary; and that unless some gain can be made in elimination of the phosphorus by finer grinding, it would only be spending money uselessly to adopt it, and that, if adopted, wet grinding would be entirely out of the question.

The Grondal furnace is very simple in design, cheap to build and not liable to get out of order, and does its work. There is very little difference between the Grondal and other tunnel furnaces with which I am acquainted, but it is probably the first time that such a design has been adopted for the purpose of making briquettes.

If we were to adopt these furnaces I would suggest two slight improvements - one being that expansion pockets be left in the fire brick lining to take care of the expansion; and the other, that the sub-structure as seen on the plan can be entirely done away with, providing the forced draft be introduced which would be much more effective and place the furnace under much better control, making it entirely independent of atmospheric conditions. This matter I have talked over

[ENCLOSURE]

with the Engineer who has done all the designing for Mr. Grondal and he is entirely in accord with these suggestions.

The advisability of building the furnaces in units of four or six was talked over, but this is something that cannot be decided immediately as it depends a great deal on the ground available. and I think will have to be left to Mr. Simpkin to settle. This much however I would say - that too large a unit should not be adopted as it would mean too many furnaces idle should an accident happen to one of them.

I am, Gentlemen,

Yours obediently,

(Signed) J. B. BALLANTINE.

[ENCLOSURE]

DUNDERLAND IRON ONE CO., Ltd.

Minutes of a Meeting of the Works Committee held at Fitzalan House, Arundel Street, Strand, on Wednesday, August 6th, 1903.

Present. Mr. Ainsworth (in the Chair)

Mr. Rhodes.

Mr. Williams.

In attendance. Mr. Pollen. ✓

Part of the Professor Louis.
time.

Mr. Ballantine.

Mr. W. Simkin.

1. Minutes of the Meeting of the Committee held on Tuesday June 16th were read and signed.

2. Grondal System of Briquetting.

Prof. Louis' Report dated July 20th on the recent visit and experiments made with the Grondal System of briquetting at Herrang, and Mr. Ballantine's report dated August 5th on the same subject were read.

The main difference in the conclusions of these two reports is on the question of whether "added fines" are a necessity in making these briquettes, but there was a consensus of opinion that the addition of fines would probably give a harder and stronger briquette. After careful consideration of all the points raised in the reports the Committee make the following recommendations to the Board:-

1. THAT THE GRONDAL FURNACE BE ADOPTED FOR BURNING OF BRIQUETTES MADE BY THE COMPANY.

As regards the size of furnace the Committee recommend:-

(a) It shall be of sufficient width to permit of taking a car 4 feet 6 inches to 5 feet wide.

The reason for the present breadth of the car (3ft.) in use at Herrang is stated to be that the men placing the

[ENCLOSURE]

briquettes on the car work on one side of it only and are therefore unable to cover a greater breadth. Arrangements will be made for men to work on both sides with the broader car.

(b) That the furnaces be built in units of four tunnels of the broader type. Certain other modifications of construction etc. to be considered by Mr. Simpkin when preparing his general plan.

2. THAT THE COMPANY ADOPT THE MOULD PRESS FOR MAKING BRIQUETTES.

The Committee make this recommendation because it appears to be proved beyond a doubt that the briquettes made under high pressure are superior to those made with the present press used in the Grondal process which is a drop press.

3. THAT THE BRIQUETTE BE A SQUARE BRIQUETTE SIMILAR IN SHAPE AND WEIGHT TO THE PRESENT GRONDAL BRIQUETTE BUT WITH THE CORNERS ROUNDED OFF AND THAT FOR THE PRESENT HAND LABOUR BE USED TO PLACE THESE BRIQUETTES ON THE CARS.

The Committee make this recommendation because they consider it of the very highest importance that the Company do not adopt at the commencement of their working a method which is experimental.

The question of whether briquettes made under high pressure can be automatically dumped on to the cars has not been satisfactorily demonstrated although there seems a strong probability that this can be done. There is, however, no doubt that the use of hand labour ensures a good briquette and the Committee is of opinion that to dump the briquettes automatically would be to run the risk of placing an inferior briquette on the market and jeopardising the sale of the Company's product. For economical handling, the larger and square briquette is necessary: for automatic dumping, the

[ENCLOSURE]

smaller and cylindrical will be required. Should it be hereafter found by experiments that an economy can be effected by the automatic dumping, and that the cylindrical briquette will stand, being carried on a conveyer to the cars and dumped, it is understood that the same Mould presses can be utilised, it being only necessary to change the dies and plungers.

4. THAT THE WHOLE OF THE CONCENTRATES USED BE REGROUND SO AS TO GIVE ADDED FINES.

The Committee make this recommendation because it has been proved that added fines give a satisfactory result whereas the briquetting without added fines although quite possible has not been satisfactorily demonstrated.

Whether additional fine grinding rolls are placed at Sterfoshei or at Guldsmedvik may be left for further consideration dependent on Mr. Simpkin's report as to whether the necessary plant can be put down at Sterfoshei without serious disarrangement of the plans on which the work at that place is now proceeding.

The question of regrinding the magnetite only as it comes from the magnetite separators was discussed but the Committee have come to the conclusion that there are too many difficulties to contend with and no apparent advantage to be gained in the way of increased purity of concentrate.

[ENCLOSURE]

Copy.

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August 31, 1903.

The WORKS COMMITTEE,
Dunderland Iron Ore Co.,
Fitzalan House,
Arundel Street, W.C.

Dear Sirs,

Acting under your instructions, I proceeded on July 28th to Herrang to join Prof. Lewis and Mr. Ballantine in an investigation of the work of the Grondal furnace. I arrived at Herrang after the work of actually forming the briquettes of the Dunderland concentrate had been completed and just as some of them were about to be taken out of the furnace. Both Prof. Lewis and Mr. Ballantine kindly put me abreast of all they had done up to the time of my arrival and I have also had an opportunity to read their reports and listen to the discussion of the same at your meeting.

I agree with them in that satisfactory briquettes were produced by the Grondal furnace from the Dunderland concentrate of different proportions as stated in Mr. Ballantine's report and as shown by the samples submitted to your Board. I also agree with the suggestion that should we adopt the Grondal Furnace, they ought to be made wider and longer.

Whether they are to be erected in batteries of four or six, or singly, I think is a matter that cannot well be determined until the whole scheme, cost of construction and cost of handling the material, has been thoroughly worked out.

I do not agree with the cost of briquetting as set forth in Prof. Lewis' report, as my calculations show not less than five pence per ton for labour only, not including the men at the gas producer, and this is based on working three shifts per day of each eight hours, and paying the men Kr.3 per shift.

Mr. Grondal in his English completed patent specification No:18429, July 10, 1902, says, -

[ENCLOSURE]

"I find that if the ore is sufficiently sub-divided it may be brought into the form of blocks by mixing it with water and stamping it into bricks which are immediately burnt in a suitable furnace."

Prof. Louis says, -

"The more finely ground the ore the better are the resulting briquettes."

It is very unfortunate that the Grondal people tampered with our concentrates before the arrival of Prof. Louis and Mr. Ballantine, which however they did in direct opposition to our instructions and for reasons only known to themselves.

Mr. Ballantine says, - "They mixed the hematite and magnetite concentrate together and ground up 30% of it to fines before our arrival at Herrang."

It is not clear to me whether this means they ground up 30% of the concentrate to try and make fine, or they imagine they actually produced 30% of fines, as after this mixing and grinding it was hardly possible to find how the concentrate stood with respect to the supposed fines. I understand wet grinding in a ball mill was the process adopted, and if so I do not hesitate to assert that little or no extra fines were produced from our ore. After hematite has been reduced to a certain size, it would be hardly possible to grind it finer in any mill such as they at present have at Herrang. Magnetite is somewhat more amenable to reduction and if a small portion of fines of magnetite were produced in the grinding, I am sure they were afterwards washed away. I will go further and say that our concentrate, after treatment by the Grondal people in their mill, which concentrate was afterwards made into briquettes by Prof. Louis and Mr. Ballantine, had less fines than the original concentrate as shipped by us.

As before stated, it is a pity our concentrate was tampered with as it prevented any comparison being made between

[ENCLOSURE]

the relative fines of the Dunderland and Herrang concentrates and the amount of what is termed "added fines". Mr. Grondal is wedded to 'added fines' and Prof. Louis advocates the same but evidently without having used any means to find out the actual amount of fines which he says need to be added to the Dunderland concentrate, nor does he say the amount of fines which they assert is used with the Herrang ore. As far as I can gather he has simply agreed with the statement made by Mr. Grondal, and neither of them have said what "fines" are.

I do not agree with Prof. Louis in his statement - "that the more finely ground the ore the better the resulting briquettes" - as my experience has shown me that you can grind the concentrate so fine that the briquettes in passing through the furnace will burst open owing to the impossibility of the steam formed from the moisture in the briquette being able to escape. A proper amount of fines, or as Mr. Grondal puts it - sub-division - is necessary, and I claim that we have in our present concentrate all the sub-division we need.

Our concentrate is ground so that it will pass through a .016 screen, and therefore is .016 and less. I shall be pleased to show the Committee that with our concentrate, having a mixture of 70% hematite and 30% magnetite, over 45% will pass through a .007 screen, and less, and that of the magnetite concentrate alone, more than 50% will pass through a .007 screen, and less. I have been given to understand that when Mr. Grondal first attempted to make briquettes of the Dunderland concentrate, hematite alone was sent to him, and as pure hematite contains much less fines than our regular run of concentrate, I think this has probably caused him to bring up this matter of added fines.

[ENCLOSURE]

I understand Mr. Grondal crushes his ore and then separates it, and afterwards grinds a certain proportion into what he calls "fines", but I doubt very much from what I saw when at Herrang whether there are more actual fines in the Grondal concentrate as it goes to the briquetting press than in our general run of concentrate. Grondal's concentrate, I feel sure, is not originally ground as fine as ours, and it is for this reason he must use added fines.

To put in a set of re-grinding rolls, with the attendant motors, conveyors, etc. will cost about £4000. It will cost not over £100 for one of the Committee to go to Herrang with Mr. Ballantine and see briquettes made from our concentrate on the improvised press which is still there, with the addition of water only as a binder, and with no added fines. The gentleman could first accompany Mr. Ballantine to Richmond and see our concentrate boxed in the proportion of 70% hematite and 30% magnetite, and these boxes could be afterwards sealed and sent to Herrang to avoid any tampering with their contents, and I can assure you that if this is done you will see more satisfactory briquettes made than Mr. Grondal is now producing with his alleged addition of fines.

Water has been used as a binder in briquetting many substances, and there is nothing new in its use. Mr. Ballantine when at Pittsburg, at my request, made briquettes on the Mould machine out of the regular Dunderland concentrate and without any added fines, and these briquettes could easily be handled as they came from the machine and without having to use a trowel to lift them as is the case with those made by the Grondal press when using the Herrang concentrate.

I may add that I am reasonably sure we can automatically handle briquettes made from our regular concentrate if of the proper form and made with a proper press, but I entirely agree with your recommendation that it is better to remove the briquettes from the machines by hand until we have had an

[ENCLOSURE]

opportunity to try the automatic handling in actual practice.
My conclusions therefore are, -

1. That the Grondal furnace will work with the Dunderland concentrate to our entire satisfaction.
2. That the furnaces should be made wider and longer so that we can handle at least 3000 lbs. of briquettes per car, putting in and taking out a car every 15 minutes and only using 20 tunnels.
3. That high pressure in the briquetting machine is absolutely necessary to produce a satisfactory briquet.
4. That only a certain amount of sub-division is required in the Dunderland concentrate to make satisfactory briquettes and that in our regular concentrate as it will go to the briquetting machine we have all the sub-division necessary and that we do not need to re-grind for added fines.
5. That Mr. Grondal, if we decide to use his furnaces, shall furnish full working drawings of the proposed furnaces, with the changes as set forth, and that afterwards if we have any alterations to suggest, the same shall be submitted to him for his approval.

Yours truly,

(Signed) Wm. SIMPKIN.

September 1, 1903.

P.S. Since writing the above report I have received from Capt. S.H. Pollen a box of the Herrang concentrate, with the "added fines", just as it goes to the briquetting machine, which was sent here by Mr. Grondal. We have carefully dried, screened, and weighed the same, with the following results:-

- 6% of the concentrate was left on a .018 screen;
- 54% of the concentrate was left on a .007 screen;
- 40% of the concentrate passed through a .007 screen.

[ENCLOSURE]

We carried out the same experiment with the regular Dunderland concentrate - 30% magnetite and 70% hematite - with the following results:-

All of the concentrate passed easily through a .018 screen.

48% of the concentrate was left on a .007 screen;

52% of the concentrate passed through a .007 screen.

Thus it will be seen that my surmise is correct and we have more fines in our regular concentrate than the Herrang concentrate has with its "added fines".

This experiment was carefully made three separate times by a man accustomed to laboratory work and the concentrate in each case was passed the same number of times over the screens.

We shall be pleased to repeat these experiments for the Committee at any time as I think they conclusively show us that we do not need added fines and therefore can save the expense of the extra set of rolls, etc.

Standard Construction Corporation Limited.
ALL LETTERS SHOULD BE ADDRESSED:-
ENGINEERING DEPARTMENT. *Fitzalan House, Arundel Street.*
TELEGRAMS: STANCOLI, LONDON. *London, W.C.*

No: 30.

September 8, 1903.

THOMAS A. EDISON, Esq.

quarto Harter

Dear Sir,

Enclosed please find blue print F.322 which kindly substitute for the B.322 sent you the other day with the other Blower prints. You will note that I have changed the number of blades from six to eight which will give a more even current and not so many pulsations.

We are also mailing you under separate cover a set of prints of the 7 ft. Rolls as follows:-

C.105, 106, 114, 131.

B.121, 122, 123, 124, 125, 131, 132, 133, 134, 135,
153, 162, 216.
015.

Yours truly,

Wm Simpson

C.K. O'S.
Oct. 5-03

Standard Construction Corporation Limited.

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLI, LONDON.

Fitzalan House, Abchurch Lane,

London, W.C.

No: 31.

September 26, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

Since sending you the drawings of the Blowers I have decided to make the shell of the blowers of $\frac{1}{8}$ " material, stiffened where necessary with angle iron, instead of out of $\frac{1}{16}$ ". This adds very little to the cost of labour and will make a much superior job.

We have completed the small set of Fine Grinding Rolls and are now putting them in at the Laboratory. We shall build a blower exactly of the size which we purpose using at Dunderland and shall be able to carry out some very interesting experiments so as to find out the proper speed and also the best position for the baffle plates, and to decide what number and size of screens we must use to equalise pressure.

The General Meeting of the Dunderland Company was held on the 24th, a report of which will be sent to you, and I will simply say here that everything passed off very smoothly and what the board has done met with the approval of the stockholders.

The Dunderland Iron Ore Co. have finally decided to use the Gröndal process for briquetting and have given instruction to take up this work with Mr. Gröndal. When I have same in a condition to send to you, I will mail you a complete set of the drawings so that you can see exactly what the whole scheme is, and it may be if you should eventually put up a concentrating and briquetting plant in the States, it will be advantageous to use this or a similar process.

It is very likely that I shall make a trip over to see you early in the coming year, as I hope by that time to have everything crystalised, for when I go to Norway it is my intention to remain with the plant continuously until it is in operation.

So far, everybody who has worked with me is very enthusiastic about the work, and I have no fear about bringing it to a successful issue.

Awaiting your favours, I am,

Yours most truly,

Wm. Gröndal

Standard Construction Corporation Limited.

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Fitzalan House, Abchurch Lane,

London, W.C.

No: 32.

September 28, 1913.

MRS. A. EDISON, Esq.

Dear Sir,

Confirming my late letter, I enclose you herewith a copy of Prof. Louis' report on briquetting which was read before the General Meeting of the Dunderland Iron Ore Co. as I think it may be of interest to you.

Yours truly,

Wm. Simpson

1 ENC.

[ENCLOSURE]

with letter #32, dated Sep 28 1912

Copy of a letter from Professor Louis to the Chairman and
Directors of the Dunderland Iron Ore Co. Ltd. dated Sept. 1912.

Gentlemen,

I beg herewith to report summarily upon the Briquetting
Process, which is now under your consideration:

The finely ground concentrate produced by the Edison
process, and consisting as you are aware, of a mixture of
specular hematite and magnetite, is moistened with 7 to 8 % of w
water, and is moulded into blocks about 6 inches square by
3 inches deep, under a powerful press. These blocks are
transferred to iron cars covered with firebrick, upon which
they are passed through a tunnel-like furnace about 160 feet
long, in which they are heated up to a temperature of about
1300° Centigrade. The furnace is gas-fired, the air needed
for combustion being heated by passing over the burnt briquettes,
which are thus at the same time cooled. The result is that a
marked economy of heat is attained, the consumption of coal
being under 5% of the weight of the briquettes.

I have watched the process in operation on three separate
occasions, spending each time several days at the works. Two
such briquetting plants have been in operation for some time in
Sweden with very satisfactory results, working however upon
magnetite alone. The works which I visited have made over
2000 tons of these briquettes, a considerable quantity of which
have been shipped to this country; they proved to be of ample
strength and hardness, arrived in good condition, and gave
entire satisfaction. My experiments have shown that Dunderland
Ore can be briquetted as successfully as magnetite in this
way, a very slightly higher temperature alone being needed.
I had about a ton of briquettes made from Dunderland ore,
which were shipped home and were quite satisfactory.

The furnace is simple in construction, so that the plant
is relatively inexpensive, the costs for fuel and labour are
by no means high, and as far as can be judged, repairs and renewals

[ENCLOSURE]

-2-

should not form serious items. The briquettes produced appear to fulfill all requirements of strength and porosity, and are superior to any others I have yet seen. The process is therefore in my opinion quite satisfactory.

I am, Gentlemen,

Yours obediently,

(Sgd.) Henry Louis.

M.A., A.R.S.M., F.I.C., F.G.S., etc.

Professor of Mining.

20/1/22
H. Louis

20/1/22

20/1/22

20/1/22

Standard Construction Corporation Limited.
ALL LETTERS SHOULD BE ADDRESSED:-
Fitzalan House, Arundel Street,
ENGINEERING DEPARTMENT. *London, W.C.*
TELEGRAMS: STANCOLLI, LONDON.

No: 33.

September 30, 1903.

THOMAS A; EDISON, Esq.

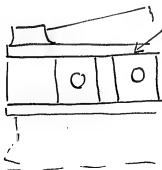
Dear Sir,

Re. Fine Grinding Rolls.

I would like to know if you have found it necessary to arrange for oiling the blocks which carry the bearings for these rolls? I mean the blocks between the top and bottom girder as they are almost constantly moving, - slightly, it is true, - whilst the rolls are in operation.

Yours truly,

Wm. Simpkin



[TO WILLIAM SIMPKIN. OCTOBER 12, 1903]

101
The following are my notes on drawings sent by Mr. Simpkin
Letter No. 21

C-105 OK
C 106 OK
C 114 OK
C 131 OK
B 121 OK
B 122 OK
B 123 OK
B 124 OK
B 125 OK
B 131 OK
B 132 OK
B 133 OK
B 134 OK
B 135 OK
B 153 OK
B 162 OK
B 216 OK
O15 → ~~hydraulic~~ this hydraulic may be too light

2

B-342 = Think this flooring too weak -
 All the big pieces are lifted up on the
 teeth & top of dipper and dropped into
 the skips, sometimes they drop 3 ft or more -
 pieces weighing 10 to 15 tons do not give
 a gentle tap - the strain due to impact
 is terrible & it takes strong cars to stand
 it - We find at Edison - Cars with outside
 stringers - 6×10 - inside 4×12 - the top
 was the same, Cement Co's Car is stronger
 both are entirely too weak for 6 ton
 skips. therefore you can judge ~~what~~
 what B 342 will be = ~~the~~ your axles
 are $3\frac{1}{2}$ and are entirely too light - and
 you will have twice the load and four
 times the stress from impact due to dropping
 big chunks from the dipper top.

Don't forget the extra pieces of timber
on top of car above the regular floor
to guide the skip on each side of it
~~to the~~

Rear end of skip wants # 6x-one
inch holes ~~for~~ to permit water to run
out = Otherwise skip OK —

Pullen C-135 - OK - all bolts on this chest
will get loose if not perfectly cottered close
to nut - ~~preferable to have a cotter~~
~~with a lock washer~~

Pullen C-136 - ~~See~~ Hopper door should have
plate inside to keep mud from
coming on joint - see sketch NO 1
otherwise OK

4

C-137 = My impression is that on the first 5 ft roll ^{steel casting for} 9 advised ~~Cast steel~~ happen so the chunks are large & the pounding is terrible. the roll throws the chunks out of dead line - You better stiffen - the other 5 ft rolls will be OK with this scoop, ~~with~~ except that your wear plates will have to be renewed often & you should contemplate the replacing of the corat iron with chilled iron.

Roller C-148 = OK

B 269 = What kind of a rigging are you going to use to permit me man to raise roll doors - We use ^{hand} windlass & ratchet - This makes it easy for inspecting plates which should be twice a week.

3-

B-269 = Is the arrangement on the first
5 ft roll for removing hopper heavy enough
I think dirt will get in & disturb your
trailing. Don't you think it should be
covered.

There will be a lot of spilt of ore from
open place, under the shaft - I cant
say if Perundel and ore will give
enough to be a serious trouble
but you better be prepared for trouble
I also think that on the first 5 ft
rolls that the bottom edges of the hopper
undamaged. Rolls having no support
will be pounded out of shape the first
~~few~~ days run - Cant you manage to
strengthen the edges ~~very~~ the more the better.

6-

B-270- I think happen under 3rd 5ft
is rather unstable, as you have two chairs
hung to it one to the 4th and the other
to the 5th set. ~~As I understand it~~
~~discussing if you want to join the~~
~~hopper from 4th or 5th set, you have~~
~~to run the hopper up by so~~
~~doing you pull the chute down~~
you will certainly have trouble here

B 259- The bottom of this hopper
is ~~entirely too light~~ is not backed
up ~~enough~~ enough - ~~The angle~~
at Edison under our four foot
rails we had ^{one} inch plate backed

7
up by three feet of solid timber and
it bent it so bad after some months
run that ore couldn't run out of
hopper. The cavity filled & made
a non slipping surface - we kept
things going by sawing plates -
Now this was not under Giants.
The Giants at Conant are smaller
than at Edison & have smaller
chunks. Yet we have a thick
~~cast steel~~ ^{cast iron} bottom - with your
Giants the chunks will be very
much larger than at Edison
& owing to the greater weight of the ore
from high quality and the great fall
of 26 feet ~~at the~~ the quantity

8
great speed due to the combined
Effect of the Roll & gravity the
Concussions will be gigantic -
at the outer an arc of 2 or 3 ft
from the Center line, - ~~with a~~
the braking you have would last
no time at all, ~~if~~ on the other
hand if the mill management is
well drilled & taught that the
hopper must never be run so empty
that the ore will strike the steel
plate but always the ore
you will have no trouble -
It is for you to judge if they
can be trusted to do this -

9

Something is wrong with the regulating
roll of the roller feed mechanism —
Can't understand it — seems to be loose
too far, can't understand how gap
above roll place — some more
details of the roller feed as this
is very important to have this
just right otherwise you will have
bridging of ore in the hopper &
this is fatal to your daily capacity
being kept up — ~~to be detailed~~
I want details also of spur gear drive.
The hopper chute above roller feeder in which
regulating roll is seems to be unstable
occurs — How can men get in with
crows to break up an ore arch
should it occur as it does often

B-290 See 289 B-

B 291 ditto.

B 292 - Think there should be a removable wear plate on sides of roller, food as this wear here is very considerable & it will be expensive to throw away the whole side because a source of wear is worn. Chilled iron would be the thing -

B-293 See notes on 289 B

B 291 - " on 289 B

B-293 = ~~the~~ See previous notes -

B 297 ditto -

B 299 = The wear on the chute from Roller food

to 1st 5 ft roll will be very great ~~at~~ ^{point where it starts to narrow & all the} at the ~~narrowing point~~ ^{point} - The wear will be way along the machine - so severe that nothing but chilled iron will be satisfactory -

B-300 - See previous section notes

B-301 - "

B-304 - ~~OK~~ See remarks B-269 ~~OK~~
~~Except that~~

B-305 - OK

B-306 = See remarks on B-269 — also 2 fear
~~that~~ that Dunderland ore will soon cut
 out all the chutes and so rapidly that
 you must contemplate removing the worst
 now plates with chilled plates — even
 the Chalk is cutting the bottom out
 of our chutes at Colmont works
 where ore goes from 5 dumps to
 the blowers and we are getting
 ready to replace by chilled plates
 See sketch NO2 ~~and~~ if this is

12

true of a trifling amount of a soft material
which will it be with heavy loads of
cutting ore or heavy specific gravity ore
with Dunderland -

B 307. See 306

B 308 = ~~Am not~~ ^{Think} cast iron check plates are not
strong enough for 1st 5 ft rolls - there is a
prying action ~~of the big chunks~~ ^{between rolls} which
will break almost anything - except the check plate.

~~309~~ ~~The~~ ~~head~~ ~~of~~ You will note that in all
my remarks that I fear your hupper
arrangement on this roll - I am sure
that it will not stand up -

B 310 = ~~check~~ ~~hopper~~ check plate may stand.
The Ratchet, but there will be no margin
for safety - I do not like the instability
of securing the check plate, the ^{hopper on} traily
is not a very stable thing to fasten it to.

Pieces of ore get between tits of roller the
 Check plate, and the check plate sometimes
 has to act as a crushing surface, you can
 imagine what strain it will be subjected to,
~~our~~ our chilled plates were always breaking
 on 36 inch rolls - They are breaking at
 Cement as well as wear -

Notes
 B = 311' OK -

B 312 - shelf too light - the edge will wear
 rapidly ~~at~~ where ore drops
 off shelf - to chute below it will wear
 about $\frac{1}{8}$ of an inch per day nothing
 but the ~~best~~ ^{deepest} chilled iron wear plate
 chilled drop will stand & this should
 be made easily removable ~~some~~
 look out for turning corners & dropping
 ore continuously on one spot no one

14
Can realize its effect when enormous
quantities are handled —

B-313 — see 312 B — gate slides of this kind
never work orz gets in and sledge hammers
will not budge them — they work on coal
because you can crush that — as the
space above the pushed in gate will
fill up with orz there will be ~~about~~
~~pressure~~ about $\frac{3}{4}$ of a ton pressing
on the gate & sometimes the gate
must be moved quick — there is a
wedging action of the orz on gate at
the slot due to pressure & pieces
clig in ~~at~~ plate & lock it, then
comes the sledge hammer.
Something like fig 3 will have to
be used — this is used at cement work
on 3rd 36" Roll chute —

15

B-314 Cant tell how the delivery will work
without seeing it. Trial packing of belt
is sent, its a ticklish operation to deliver
from tons an hour on a belt & requires
a great amount of experience. ~~In the~~
~~first time at least we never do.~~
This branch of the business should be
fully detailed & submitted for criticism
or it will cause a great amount of
delay, trouble & expense. —

B 316 — ~~Why do you depend on~~
~~Steel Castings for Hoppers~~
~~for Giants?~~
I do not approve of the hoppers
on the Giants at all — It should
be made of steel Castings

like that on the Giant at
Cement works - but twice as
heavy = In my opinion the hopper
shown would not last for one
days crushing = ~~at Cement & Tank~~
at Edison we had hopper $2\frac{1}{2}$ inch
steel ^{cast} + ribbed every 12 inches
with ribs $2\frac{1}{2}$ thick + 6 deep
the thrust on the end plates
of the hopper was taken
on the side plates & not
on the balls ^{but} at Cement
works the thrust of end plates
~~was~~ are taken on the ^{$1\frac{1}{2}$ inch} balls
+ they are constantly breaking

17:-
your enclosures will probably
be 3 or 4 times what we
had at Edison —

Chilled plates ~~are not necessary here~~
~~as there are few touches the chills~~
would not stand at all. I can't be
used — as chilled plates are ^{put in} I can't
see how you are going to take
them out without taking the
hopper to pieces — There ~~is~~ no
brackets to hold Hopper
laterally except at foot,
& against beams — You know we
have four Rods Touches ^{diagonal} ~~back~~
at Cement,

18-

You havint got the Roller fired above Giants
right - a ~~six~~^{dix} foot chunk will give a
Trajectory landing it on top of the
roll - ^{End of hopper} which is very bad, I explained
this once before to you, the Mill at
Edison was shut down 3 weeks and
we lost about ~~ten~~ thousand dollars
because we didnt have this
right - ~~It was a mysterious thing to~~
~~me that you apparently ignore all~~
~~our experience & plans already~~
~~existing in regarding these Giants~~

19.

~~Enough~~ ~~notwithstanding~~ you have no
experience with rolls of this

~~character~~ ^{the} you must know that

If mistakes are made ^{on giant} ~~the~~

it will would delay the starting
of the mill for months and

the Cost ~~expense~~ would be enormous

for general Expenses to say nothing
as to the ~~the~~ Cost of any

specific change = your feed
roll is to ~~be changed~~ There is so
much wrong about these

Rolls that you better redesign
 the ~~gutter~~ ^{hopper} & say out follow
 the Experience gained at Edison
 & Cement & end corrected

Drawing - and in this connection stick to old
 John Fritz's rule of making lots of mistakes in getting
 everything too heavy - Remember static loads & concrete
 loads are fearfully & wonderfully different as I know to my cost
 There is nothing on the drawings

showing where roll is to
 have the v-lugger plates.
 They should be on roll
 farthest away from Roller feet
 Leave off the extension of the
 hopper above the top of

the roller feed - then when
 ready to run a shield only
 about $2\frac{1}{2}$ high & partly around
 can be put on as its only to
 guard man cleaning skips &
 roller feed from being hit by
 flying Rocks - at Cement
 our steel casting comes up
 level with the ^{top of} roller feed -

You have hopper extend over roller feed
 How do you expect man to clean
 out skip & top of each skip

it couldn't be done & yet its
absolutely necessary.

If you want any drawings ^{of kind} from
Carnegie or Edison I will send
them - See sketch of No 4.

Showing trapezoidal which
should be made for large

chunks as the swivel

Drift will take care of

itself = you do not send

any details of bearings -

Supports, Roll drive etc. - ~~the~~

~~For some~~ ~~The arrangements for a~~

It is needless to go into further criticism of the Grand Roll arrangement. It would seem to me that you could have saved a great deal of time & money if you had sent a general sketch before making elaborate detail drawings.

B 317 - See previous notes,

B 318 - See previous notes

B 319 - See previous notes

B 320 - See previous notes

A 172 - See note on B 289 - B 292, B 300.

A=176 - would like details of gardens that Rolles put on - the plan of bracing. These gardens have been criticized before. ~~as they are shown~~

24

Without details, my experience will not permit me to ~~sub~~approve them -

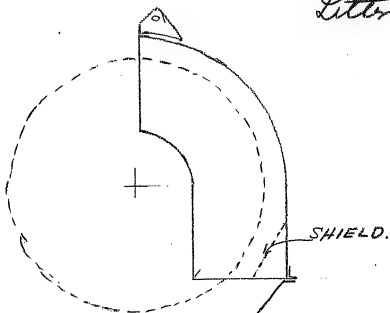
A 160 - I think your monoliths are all right for strength & that as far as they are concerned we shall be all right - The pockets shown in '019 are not shown in

A 160 - Why is this, =

You should send General & Detail drawings of Joints & Connections as there may be changes in details that may turn out troublesome.

We have not received any
corrected Blue print of the 1st 2nd and 3rd.
5 foot - Rolls

Letter #21

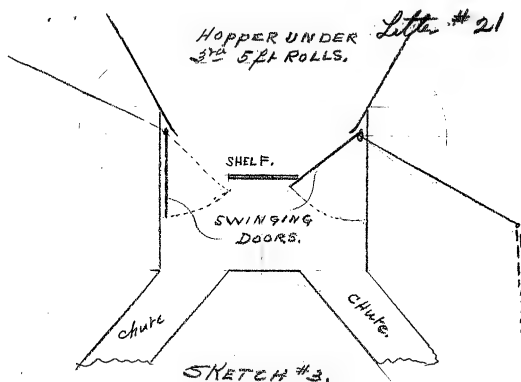


SKETCH #1

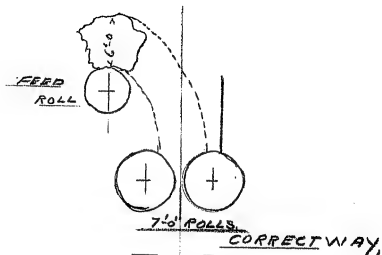
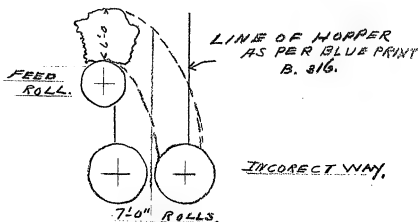


#2.

HOPPER UNDER *Letter # 21*
3rd 5 ft ROLLS.



Letter # 21



SKETCH # 4.

[TO WILLIAM SIMPKIN, OCTOBER 13, 1903]

(11) Letter # 22

B 330 - Balantine got Cement Co. blue
print - The plates are about right,
but I may be that Dundee and
one will not diffuant and you
should have Balantine set their
sight on a full sized experimental
model which I understand
you have in London ~~with the one~~
~~cast~~ So I will leave this drawing
for you to approve - as to the details
on drawing the ~~of~~ quarter inch plate is
all right for stiffness, perhaps it
would be 10200 to 10200 bolts.
or when finally assembled
~~there~~ it will on washers nearly to
heat & burn over as they are

(2)

in a position where they will receive
no attention -

~~B-322~~ Nate - please show infinite
drawings ~~for~~ in details if you intend
a Cutter or other way of locking
this will save me lots of writing
as I always spot every nut that
can get loose -

B322 - I suppose you have
determined on your full sized
model blower that Eight blades
is better than six - but if you have
not would it not be better to
stick to six as we know this

(3)

10 or 12 + while there seems to be no
reason why Eight would not be better
I wouldn't change without I
absolutely knew from Experiment
that it was better I have been
caught too many times on these
self evident propositions to make
changes - The increase in diameter
from 5 to 6 ft I suppose
you have tried ~~in these changes~~
I approve of these changes
provided you have tried the Experiment
on full sized model & found
them all right with the ore itself.

□

I note that in your letter of
May 2nd 1922 you state you
will make the shaft ~~2~~

three and fifteen sixteenths
as requested
diameter, whereas in B-322

it is only two and fifteen sixteenths
~~four and one eighth~~ In view of
our troubles with shaft at
Cement I cannot approve
of making the shaft any lighter
than three & fifteen sixteenths
in diameter & its none too
large at that —

(51)

I want to call your attention particularly to the fact that the fans should be balanced in the shaft. Ours at the Cement works not hence our shafts are bent & bearings are cutting. the whole thing a source of infinite trouble & Expense -

A. 179 - would like assembled drawing of Blower with baffle plates, Racer feed & everything complete - then I can make a more intelligent criticism to a little blind now. Both drawings sent

(6)
Increasing the casing sheet from
 $\frac{1}{16}$ th to one Eight is an improvement
The vocal casing for fan wheel
don't look to me as if it was just
right - I mean the sweep -

Would like a blue print of the
bearings you intend using
on fan shafts - & how you are
~~going to make shafts~~ going
to insure alignment of so long
a shaft on such a structure as
you will have -
~~where is the lattice work on bottom~~

(7) ~~if this works well if you do~~

What is the warden door for
in the lower loft? Is in corner

Where is the lattice openings in bottom
~~off~~ with spout to let dust accumulating
in fan bottom down into main chute,

I suppose you intend doing away
with the return air flues from
top of dust bins, using free air
from Mill. getting rid of the air
blown in by some means unknown
to me if this is correct I do
not approve of it, I know that
it will not be successful

(8)

If you & the Company must assume
all responsibility for any changes
made from the plan at the
Cement works ~~It is intended~~

~~to be done~~ As far as I can ~~see~~
understand the general
plan of Glover Building
you intend exhausting from
all the chambers by a
long duct, ~~if you~~ ~~see~~
if you put an exhauster at one
end or even at both ends,
~~The Chamber~~ Such a ~~will~~ ~~be necessary~~

(9)

to draw the air out of the
Chambers will have to be so
great that the first, second and
third Chambers will have a
draught strong enough to
suck the ore over - I am

Darry you have departed
from an actual successful
working. 6 Power house +
go in for changes on the most
ticklish operation in the
Plant - perhaps I am

(10)

Wrong in my deductions but the
blame & difficulties are not clear
so I can tell properly what is
intended. —

A 178 — Dec 179. —

Should you & the Co decide to go into
the change in the Glover house
methods, you better insure yourself
against a failure by ~~loan~~ so
designing the lay out that in
case it did fail you could
put in the return fees which
in my opinion you will have to
do —

(11)

B-217 OK —

B 218 OK

B 219 OK

B 220 OK

B 221 OK

B 222 OK

B 223 OK

B 224 — OK except don't underline and

Bottom "H" of what is ^{this} shaft for &

why so small a diameter

Compared with the others

Want blue prints of all idler

bearings —

Also side idlers —

Note the side idlers at Cement are

all being changed as the L Rubber

02
Calches top d bottom.
See sketch no 1 — attached here with.

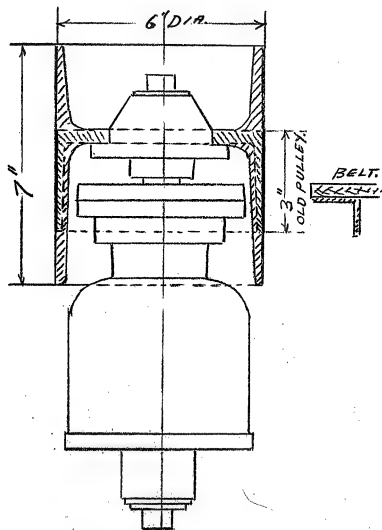
B-225 — I note tail pulley shaft
does not have any thrust
collars in bearings — How do
you take lateral movements.
Note Want Blue prints of all
bearings —

B-226 — note same as B 225 on first
3 shafts — the three other
shafts have thrust in bearings.

(13)
B-235 OK—

B-240 Have no arrangement
of Inside & if you & the Cohans
~~no objection~~ of this house so
Cannot tell anything about it.

Letter # 22



SKETCH #1.

CHANGE IN LENGTH OF SIDE IDLER
PULLEY.

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Standard Construction Corporation Limited.

Fitzalan House, Arundel Street,

London, W.C.

No: 34.

October 14, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

Bearing from Oct 3 months

I am sending you by the American Express a box containing one of our idler pulleys. I have refrained from sending this until I had made a prolonged test of the same under the most exacting conditions, and I am pleased to say that I have no fault to find with the bearing in any way. You will see that this bearing is adjustable to any angle and so is readily put in position. In this - one of the smallest bearings - you will perhaps find an objection to the manner in which the oil chain has to be placed on to the end of the shaft, as for some reason or other the position of the hole on the top of the oil chamber was altered by the moulders on account of the coring: this, however, has been changed. Even with this bearing which I am sending you we find no difficulty in getting the oiling chain into its proper position, as we take out the bushing, and after laying the bearing on end we put the chain into its proper position and drive the bushing in far enough to hold the chain in position until we have slipped the bearing on to the end of the

*Hunter
Free Presses Co
give bearing to
you*

T.A.E.2.

shaft; then by means of a screw driver, or other suitable instrument, we force the bushing back to its proper position and the chain naturally is left on the shaft.

You will find on the bearing sent you, raw hide washers. These however we are not using, but washers of thin copper which are all right.

Yours very truly,

Wm. Simpson

Kindly let me know if the Cement
Plant is running again - S.

Standard Construction Corporation Limited.

ALL LETTERS SHOULD BE ADDRESSED TO:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Fitzalan House, Strand Street,

London, W.C.

No: 35.

October 15, 1903.

THOMAS A. EDISON, Esq.

Hunter

Dear Sir,

On May 20th, I wrote you in my letter No: 22 that when you received the drawings for the Blowers you would find we had made the shafting 3 15/16". I have just discovered on going over these drawings, which I had not previously checked, that although I had distinctly stated the shafts were to be 3 15/16", for some reason or other they had been drawn up and figured 2 15/16". Please note that the Blower shafts will be 3 15/16 as stated in my letter above referred to.

Yours very truly,

Wm. Simpson

Standard Construction Corporation Limited.

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

No: 36.

S

Triglan House, Strand Street.

London, W.C.

October 17, 1903.

*Answered
Oct. 29/03*

THOMAS A. EDISON, Esq.

We are running

Dear Mr. Edison,

regularly stirring out

Dr. Rouss was in here today for a few moments and
was in here 14 to 1700
was very pleased to learn from him that everything is going very
+ expect to finish in two weeks
well at Stewartville. Of course, as you are aware, our people
knowing then we think we
here are very very anxious that the cement plant should turn out
change to 3500 daily
a huge success, as it will enable them to arrange to erect open
amount is selling 180 Cents
in this country. It goes without saying that I am still more
at 11.00 - 11.00. 100000
anxious and nothing will please me better than to hear from you
direct
directly that everything is running successfully and even better
than you had anticipated.

Yours very truly,

E
Wm. Simpson

Standard Construction Corporation Limited.
ALL LETTERS SHOULD BE ADDRESSED TO:
ENGINEERING DEPARTMENT.
Tizalan House, Arundel Street,
London, W.C.
TELEGRAMS: STANCOLLI, LONDON.
No: 37.

October 28, 1903.

THOMAS A. EDISON, Esq.

Dear Mr. Edison,

Your two favours of the 12th inst. Nos: 21 and 22, were received last week, but I have delayed replying until I could go fully into it and also consult some of my people with reference to several points raised.

In the spring, when I was in Florida, we went all over this arrangement of hoppers for the Crushing plant, and both you and I made notes on a general drawing which I then had with me, and it was then decided that a hopper built out of heavy boiler plate, and properly reinforced, would be all right. The material also from which the various hoppers and chutes were to be made was discussed and agreed upon.

The position of the feed rolls was also taken up, and so far as the feed roll underneath the Giants is concerned, with its attendant agitator roll, you marked a few changes on the drawing and on my return here this was altered and a revised print, A.172 (a copy of which is enclosed) was mailed to you on May 22nd (letter No: 26), and as we got no reply we took it for

T.A.E.2.

granted it then met your views. I am requested to ask you to take the drawing A.172 herewith and mark on the same the exact positions in which you want these two rolls placed, and return the print with as little delay as possible.

I will change the big hopper above the Giants to a heavy cast steel one, and leave the upper part to be built of timber as at Stewartville.

Answer
I will move back the feed rolls above the Giants although I hardly think that this is necessary as our feed roll has only a peripheral speed of 20 ft. per minute, and in some experiments which we have made with a small model, everything being to scaled size and weight, the rock falls from the feed roll in an almost perpendicular line. However, you wish it and so it will be moved back.

I enclose you another print 068, which please understand is a diagram only, and this will no doubt explain the agitator roll and the gap which you speak of, more clearly. It is the intention when running this plant that the men in charge shall always keep a certain amount of material in the bin.

Answer
Let me take occasion to say that the class of labour which we shall employ in Norway is to my mind very intelligent and I do not anticipate much trouble in teaching them their duties.

There are many other points you have not quite understood, and I regret that I could not be with you when you were

Answer
going over our drawings so as to discuss matters and put them in their proper light, but as I cannot be ubiquitous, we must do the best we can. However, as we are going again over all the drawings we will try and make them a little more understandable when next forwarding, and where we think any point will be in doubt, we will write particularly about it.

see p 30
There is room everywhere for men to get in and clear out, and everything is properly held.

OK
015. We have already used these rods and plates to draw on the centres at a pressure of over 80 tons. We simply marked 10 tons on the jack to show that it was a jack.

B
I mail you two photographs which show some parts of our big rolls, and I want to say that a better job could not be built. I have personally seen every part of these machines, had all the bearing sleeves and other parts that should be interchangeable tried all around, made physical tests of all material - and am satisfied. The cost of these rolls which weigh 230 tons, is 4.8 cents per pound. I shall however give you a detailed list of costs of all the various parts of the machinery when the work is completed.

*Not done
S. J. [initials]*
B.342. This drawing is only a diagram which was sent out to the various Car builders along with a letter stating our requirements, and we shall accept a car which has 6" x 12" oak underframe, 4" pine deck, all properly built with through longitudinal and transverse rods, heavy wrought iron angle

T.A.E.4.

brackets, etc. and with "main line axles", 4" x 8" in the bearing and 5" at the wheel seat: this should stand. I will not forget the extra pieces of timber on the top but will not fix these until we get the skips. I have decided to make the skips out of $\frac{1}{2}$ " plate.

Answer C.136. I think we had better put the shield on the lower part of the hopper and not on the cover: see my sketch herewith.

Not answer C.137. No, we decided on cast iron: we will, however, make of steel. You know we agreed on putting in wrought iron wear plates at first and if found all right to renew them with chilled plates. This I have noted in my book; and I am also testing some pieces of manganese steel to use as wear plates which seems to stand very well.

Not answer E.269. Will use just an ordinary hand windlass with ratchet, as you suggested. I am sure the arrangements for removing all of the hoppers are strong enough, and I intend to shed them all over when in place, as I, with you, am sure they must be covered.

I will see that all nuts, etc. are properly fastened. This will be drilled into everybody in connection with the work so I don't think you need worry about it. I will also arrange for chilled iron wear plates, or manganese steel if we should decide to use this as before mentioned.

Answer I will send you a sketch of a gate slide that is working, and will work, no matter what the pressure is or what kind of material you are handling.

T.A.E.5.

agreed with the committee

E.314. You have several times said you would send me a diagram of your delivery chutes at the bottom of the Dryer and for the last two rolls, but this you have not done.

With reference to these, and all other chutes, I am drawing them up and shall do as you and I arranged and as I thought you understood; i.e. to put in makeshifts mostly of wood and when they are found to be all right to put in the permanent chute; so when you get any of these drawings please criticise them from this standpoint only, and kindly suggest any changes, but don't worry about the weight of the chute or the manner of supporting as this we will take care of.

Answer

E.316. Some parts of this I do not quite understand. Before we left Orange we talked a good deal about this matter and you certainly suggested chilled plates as the wearing plates. Kindly say what you suggest now: we can put in anything, and I would say manganese steel would be a good thing from what I have seen of it. There is a large foundry here (Hadfields) - the proprietor of which is considered to be one of the finest foundry men and metallurgists in the world, and I have seen some crushing plants made by them for crushing granites up to a capacity of 2000 tons a day, and they seem to be running along without any troubles. It is true that they are not handling stuff such as our Giant crushers handle, but pieces from about

T.A.E.6.

14" to 16" long by 12" square, and this manganese steel stands very well not only for the wear plates and the lining of chutes, but also for crushing plates.

Answer
Of course I know that we could not use manganese steel for our crushing plates, as for one thing, it cannot be machined on the back, but I think we might use it where we can for wear plates, as this hard granite seems to have very little effect on it.

Not done
About the bracing of the girders, etc. supporting the different rolls. I will send you a diagram showing this, and if you have any suggestions to make I shall be glad to have them, but when criticising again our hopper arrangement, don't bring in the supports as these are not thoroughly shown so as not to complicate matters.

Not done
Now with reference to the Blowers, - This matter we have given a good deal of consideration, and I do not agree with you that we shall have any trouble if we do away with the connecting pipes from the top of the bins to the Blowers. Our experiments show us that the putting of them in gives us the trouble, for how are you going to put screens into these Blowers to equalise the blast and then blow the return dust through them. We have tried it, and it simply cannot be done, for it doesn't take many minutes running to so fill up the screens that the pressure is all kinds of ways and not regular. We are experimenting very carefully along this line with a Blower of the exact size which we shall use in Norway, and we will take all the

T.A.E.7.

Not arrived
responsibility of its proper working, and will send you final drawings when everything has been fixed up, or I will bring them over with me on my next visit and get your valuable criticism.

With reference to the spiral casing, - this also is the result of trials and seems to give the best effect.

I have already sent you one of the small idler bearings, and will send you samples of the others when I have finished testing a few that have been made for me.

Arrived
B.224. This bottom shaft is for the idlers which carry the empty belt only. I enclose you a print of our side idler B.246 (please note the date). We had already made the pulley 6" wide so I suppose this will do. You will see that we don't need to make them right and left as the two spirals oil perfectly no matter which way they go. I am running some samples which have been made for us and so far they have proved all right. The lateral thrust where we do not use a collar is taken up in the end of the bearing; this you will see when you receive one of these.

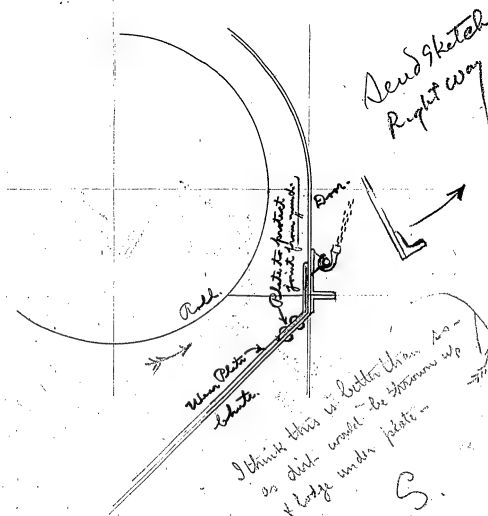
The Dryer drawings we will shortly send you.

Arrived
Just as I was concluding this letter, one of the Directors came in and requests me to ask you what is the minimum and maximum life of the ropes on the fine grinding rolls.

Yours very truly,

Wm. Simpton

[ATTACHMENT]



Standard Construction Corporation Limited.
ALL LETTERS SHOULD BE ADDRESSED:-
ENGINEERING DEPARTMENT.
Fitzalan House, Arundel Street,
London, W.C.
TELEGRAMS: STANCOLLI, LONDON.

No: 38.

Hunter
October 31, 1903.

THOMAS A. EDISON, Esq.

Dear Mr. Edison,

On again looking over your recent letters, it has just occurred to me that with respect to drawings A.125, 126, etc., the diagrams of the general lay out of the various buildings, you may misconstrue these - particularly with reference to the conveyor work in the head house. Please note that in these drawings we have simply shown the locations and have shown no details of the bracing, etc. All this work is properly braced, both longitudinally and horizontally, and, as I think I have before stated, is at least 25% stronger than anything you have at Stewartsville.

I have been talking again to some of our people and I enclose you herewith a print which will show you how I am arranging the head pulleys for all the conveyors. This which I send you is for our widest belt and you will see is driven by two motors, both the motors and the gearing being in the dust proof houses which are open to the outside air for ventilation purposes. With the 24" belt we simply have one motor. The

T.A.B.2.

whole of these conveyors will be got up in this manner, and the
bracing, etc. properly taken care of. Our Board is just
now in Session so I must leave the continuation
of this until another day.

Yours very truly

Wm. Simpkins

Standard Construction Corporation Limited.

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Fitzalan House, Abchurch Lane,

London, W.C.

No: 39.

November 7, 1903.

Dear Mr. Edison,

I have your favour of the 29th ult. and certainly am pleased to know that the Cement Plant is running in a satisfactory manner, and at the same time I am sorry that the 'boom has busted' just at the time when you ought to be making something out of this business.

Everything is going along quietly here and we shall shortly be mailing you some more drawings. The trouble with the big out at Mō still continues and the Directors want me to go out there as soon as possible and look over the ground, and I expect to leave here some time during the coming week so that if you do not hear from me for the next little while, you will know the reason.

Yours very truly,

Wm. Simpton

Your advice that Cement plant is running will do good in the right place. S.

THOMAS A' EDISON, Esq.

[NOVEMBER 11, 1903]

Letter #23
Dumplings - 066

I do not believe in using two Motors
+ 2 sets gearing for ~~your~~ your heavy Conveyors
~~you will have to~~ ~~should consider this~~
~~main reason~~ One large Motor with 25%
more power than you will ever ~~need~~
~~on ordinary~~ need, with very liberal width
of gearing. Is what I advise from the
Experience we have so far.

You can use a slow speed motor say 450 RPM - advise 24 inch on gear on head pulley & 14 to 16 inch for second - ~~2~~ You will make no mistake if you use very heavy shafts - flexibles are absolutely

Necessary with bearings on each
side of pinion = Our flexible works
perfect, You spoke about a flexible
which ~~works~~ catches & drives without
slack - We find this is a disadvantage
by the slack we have ~~in~~ when we
are shut down we can turn motor
 $\frac{1}{2}$ revolution, fix brushes, clean
commutator & feel for a bind - on
our starting up system the motor
starts slowly - Our gunny
Chamber of 100 - with 50 Horse
power 18 X 12, ~~with 3 inch diameter~~ is
just right and temperature is kept
within 20 degrees of outside

We were compelled to use three (3)
thickness of gummy for inner wall
& one for outside - to keep leaks
down = With no dust or float
we now have no trouble with
brush sparking or glazing of fused
dust, we have five inspectors
Each man has a certain number
of motors which he visits ~~to~~
four times daily - He inspects
for oil leaks, dust leaks, rubs the
surface of Commutator a little
with Crocus. cloth, sees brushes are
OK - puts all tight & notes the
temperature of thermometer

The result is our motor system is as near
perfection as anything can be & we
have no trouble except where there is
jar - Now I want to impress on
your mind the serious character of
sharp jars shaking on motors

Where we have jars on motors we
cannot keep the brushes from
sparking as the jar is transmitted
to them - the result is constant roughness
of Commutator & increase of spark
& change of brushes - ~~the~~ -

Even the Motors driving rolls should
have flexibles - I spoke to you
about this once before,

The big $1\frac{1}{4}$ inch wire rope
flexible used as wabblers on
3rd 36 Ralls is all right you can
make them to drive any amount
of power — If you use outside
~~air~~ ^{air} draw it in by fan & force out
through gunny look out that
the air outside will not be
very dusty on certain direction
of the wind — Cement works
got knocked out in two or three
places where they did this
had to go back to old way

look out & have a very large
shaft and ample bearings as
well as many spiders on the
big idler that serves to increase
arc of contact of head pulley
on conveyors. We have had
serious trouble here until we
made them strong -

B-246.

Your upright side idler should
be one inch longer, to meet

Every Contingency

I am going over balance of drawings
sent & will finish shortly -

Edison

Simplex

Alfons X 37 Read - You must have misunderstood me regarding the Hoppers for The Giant roll - & when I suggested the use of sheet steel for hoppers of rolls in places of Cast steel it only applied to the finer crushing Rolls - As Hoppers on Giant & Intermediate Rolls were reconstructed three times each one stronger than the other at a cost to me for work, delay etc of over \$30,000. The requirements as to strength would not likely ship my memory - I prefer to hoppers above top of rolls & sides - As to the hopper below Giant for storage that can be made of sheet steel & we agreed on that in Florida but the bottom I told you would have to be strong - You will not be able to depend upon the men keeping ore in the bottom to cushion blow - No matter how intelligent they are - any will constructed which

2

has to depend upon the intelligence of
the man will be a big failure - for things
so if neglect comes nothing is ruined.

I will send you this week sketch of
Giant Hopper at Edison + Roiegh sketch
of my idea of Hopper for your giant,
I refer to top + sides - also storage hopper, feed roll etc

If you get ^{no} reply from a drawing do not
take it for granted that it is all right.

~~Has a 172 inch roller but of Edison~~
~~but we have not~~

You say that upper part of Hopper of giant
at Stevensville is of wood - this is a mistake
its of steel - the giant at Edison had wood -
+ its no good - build of steel -

Speed of feed roll above giants has ^{very little} ~~not the~~
to do with the trajectory of large pieces

Your experiment with small fixed roll must have been done badly - a circle acts somewhat like an angle chute, from the time it starts to slide it moves down a circle & cannot possibly fall anywhere near perpendicular if it was wood or didn't slip it might but if iron & it slid then it forms a large trajectory. You remark that "However you wish it & so it will be moved back" Its not a question of my wishing it - its a question of getting it right & my data is based on actual working =

C 136 - Dirt will get in between door & ^{or plan you draw} happen = the sketch we sent is best thing we have found - this sketch No 1. Letter 21

4

C 137. I am sure 1st 5 ft rolls should have
Coast steel for hopper -

I think Manganese steel wear plates
are good providing they will give more
wear for the money

I await sketch of gate slide, we have used
Every conceivable one & ~~not~~ not one worked
permanently -

Will send you chute sketches this week
bottom dryer & last 2 rolls -

~~B 316 - Why do you need detailed drawing~~

B. 316. I never remember suggesting chilled
plates in upper hopper of grants. You must
have misunderstood me - we never had them
at Solson or Cement & there is no need of them

as wear on check plates only commences
when you get to finer rolls,

Please take my notes in the spirit they are
intended - I am only sending you criticism
based on Experience in actual work
with such conservative changes that will
tend to eliminate defects now met daily

If you could spend one month at Cement works
you wouldn't need any of my letters,

Our ropes last on Rolls from 26 hours to
240 hours depending on state of the plates
& evenness of feed, this is on crushing
Cement 90% through 200 mesh - with
less pressure for Coarser Crushing life
will be longer - when roll plates chip off

Load varies pressure & the stress on ropes.

~~Fig 42 = Would not it be much better if you would
send your hand sketches (personally made) with
dimensions; b~~

~~Fig 42~~ B. 246 = WE never had this drawing
before — see last letter in re making well
longer —

All drawings or parts approved by me
finally are marked ~~sent~~ + with proper explanation
are finally filed with the Sunderland Iron Ore
Co. — & I will only be responsible for those
things finally approved & filed with the Co
of which there has been two parcels already
sent —

Edison

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Standard Construction Corporation Limited.

Fitzalan House, Arundel Street,

London, W.C.

No: 40.

November 22, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

I am duly in receipt of your favour of November 11th, addressed to my Father. He is at present in Mo, but I have forwarded a copy of your letter, and he will no doubt go into the same carefully, and communicate with you in due course.

Yours truly,

Ans. Simpkins, Jr.
#

[NOVEMBER 23, 1903]

Sampling Ltr #25-

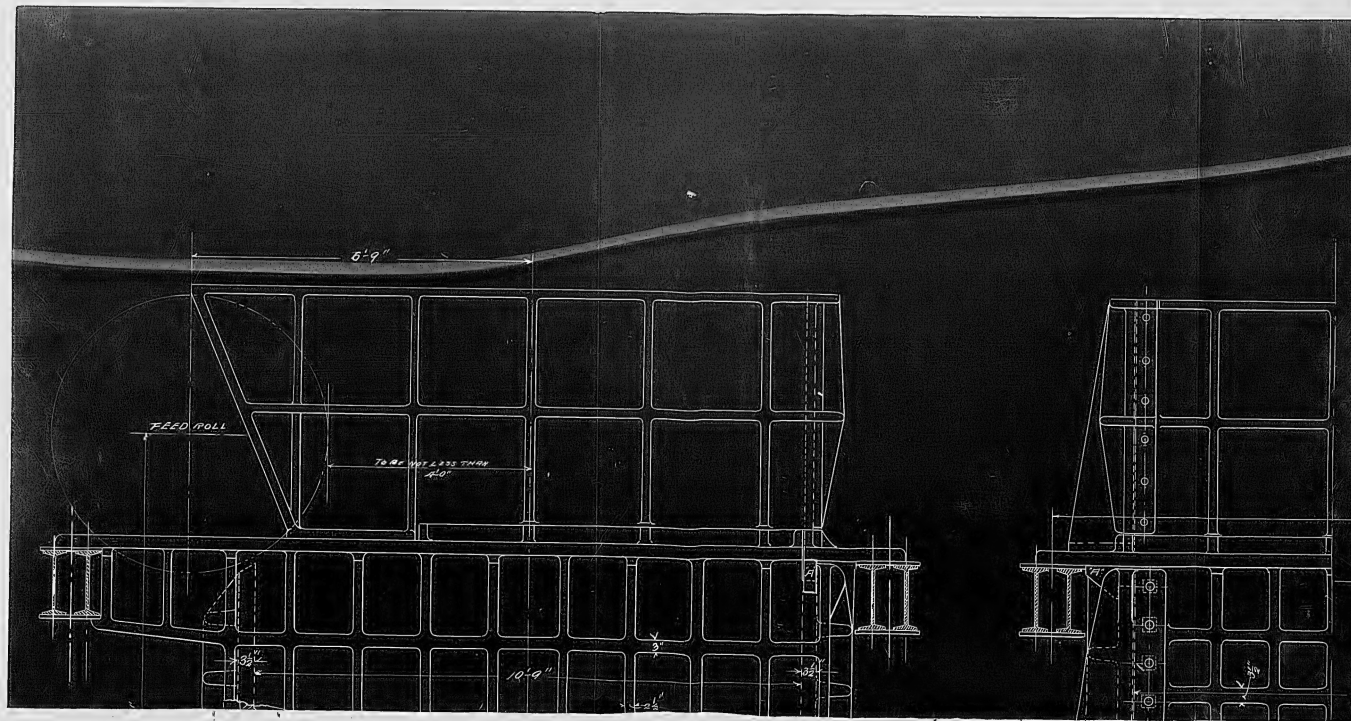
Doctor I please find B1728
showing Giant Bull Hopper as we
had it at Edison, N. J.

Also ~~please find~~ ^{Right} Prosper Hopper
for your 7th Bill - this will
give you a general idea of character
and strength of giant Hopper as it
occurs to me from my experience

Am Biff. showing Delivery Chute from
3rd 36" Roll. & conveyor #101. and
from Ligne & #102 conveyor as they
are put in at Cement plant—
now. —

1	2
3	4

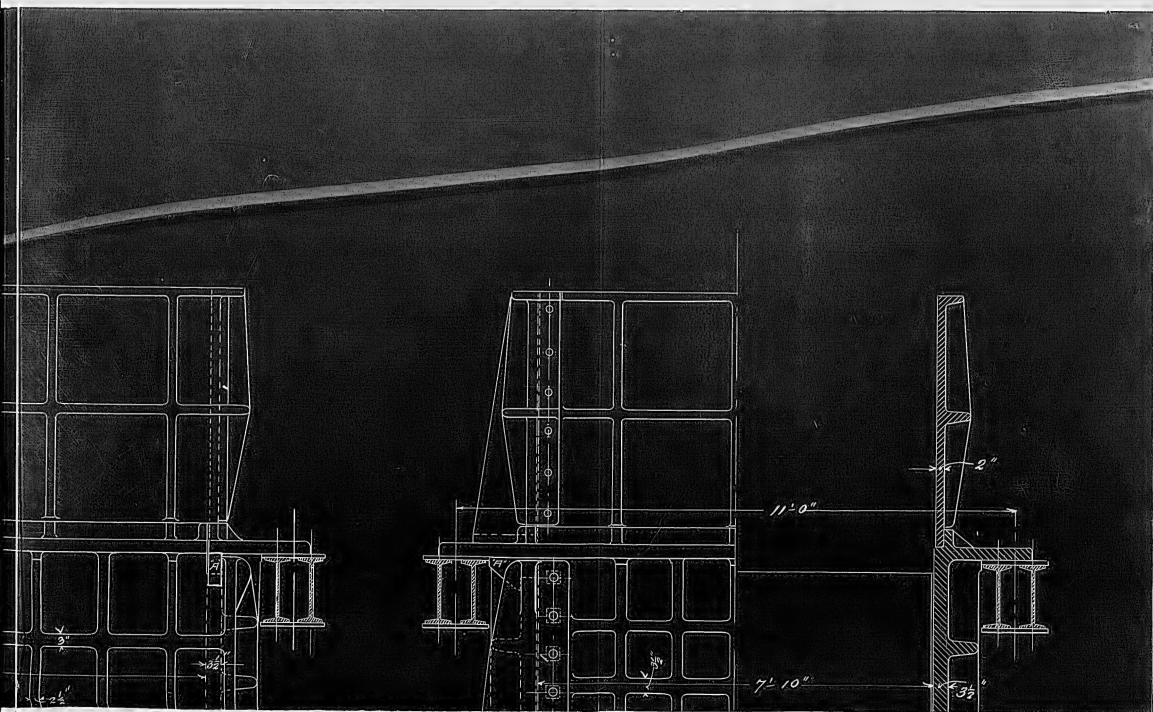
1	2
3	4



[FILMED IN SECTIONS]

1	2
3	4

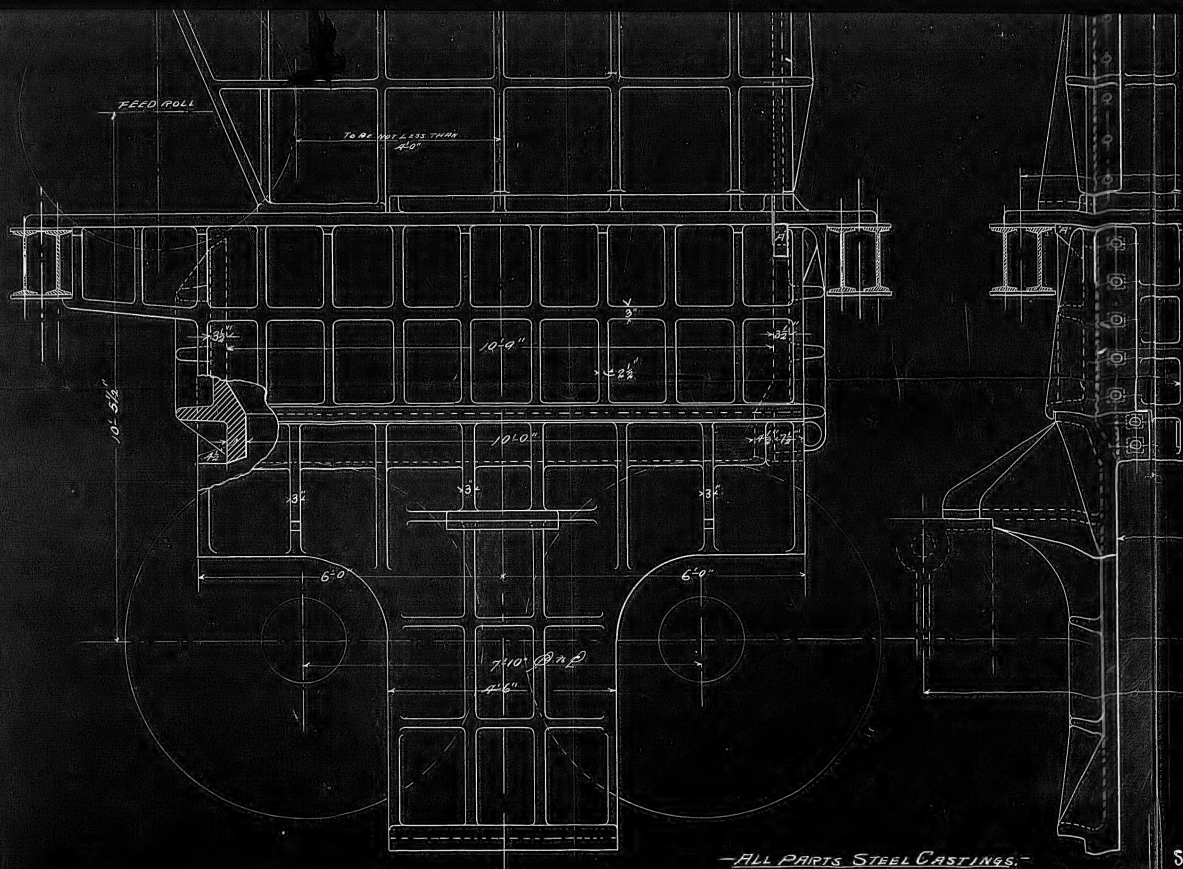
[ENCLOSURE]

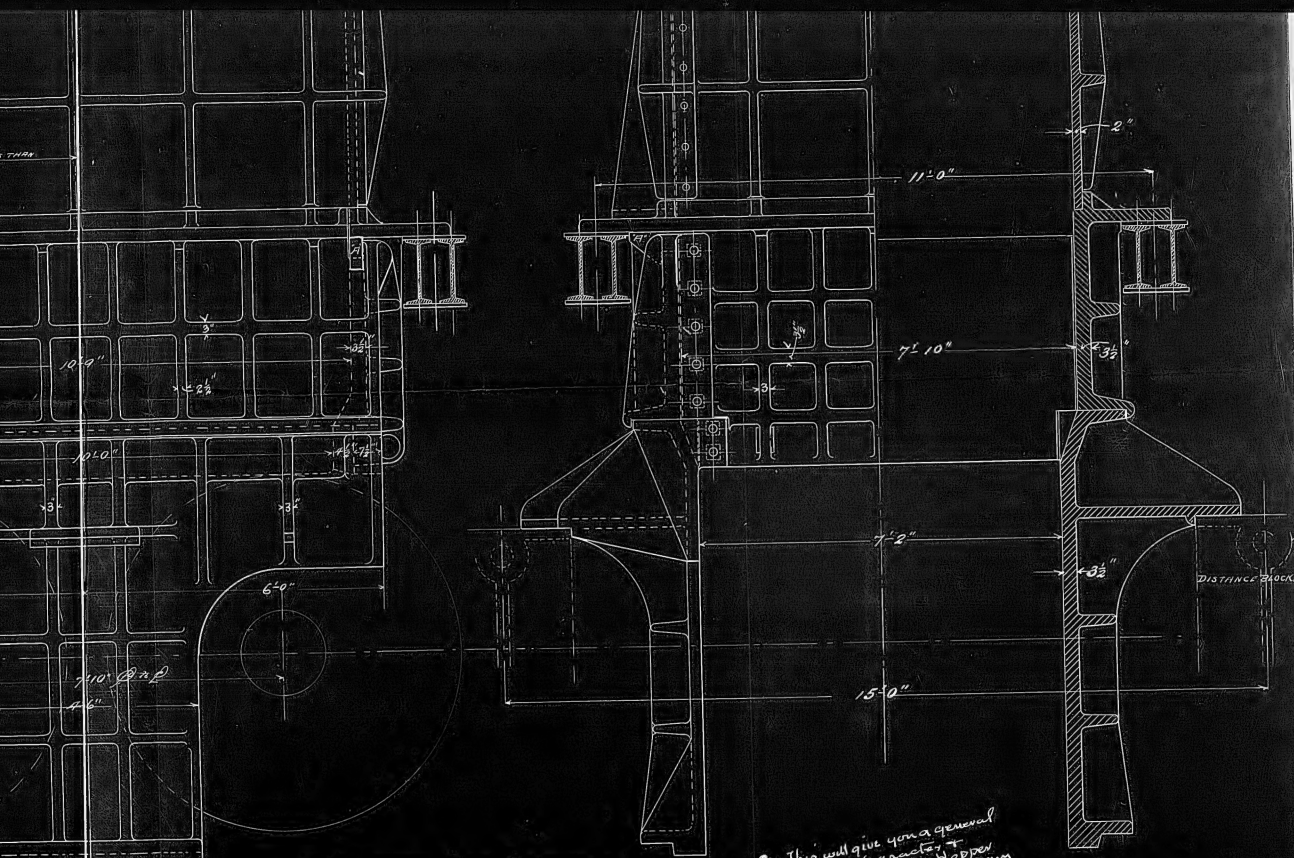


[FILMED IN SECTIONS]

1	2
3	4

[ENCLOSURE]





-ALL PARTS STEEL CASTINGS.-

5= This will give you a general
idea of character &
strength of Giant Hopper
as it occurs to me from my
experience.

PROPOSED HOPPER
FOR

7'-0" 7'-0" ROLLS

ESCHER

DUNDERLAND IRON ORE CO. LTD.

LONDON

ENGLAND

SCALE 3/4" = 1'

11-19-03

[ENCLOSURE]

[FILMED IN SECTIONS]

1	2
3	4

Standard Construction Corporation Limited.
ALL LETTERS SHOULD BE ADDRESSED TO:-
ENGINEERING DEPARTMENT. *Fitzalan House, Arundel Street.*
TELEGRAMS: STANCOLI, LONDON. *London, W.C.*

No: 41.

November 24, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

Your letter of the 16th inst., addressed to my Father,
is duly to hand. I am forwarding a copy of same to him at Mo,
and you will no doubt hear from him in reply in due course.

Yours truly,

Standard Construction Corporation Limited
J. M. Simpson, Jr.
J. M. Simpson

[NOVEMBER 25, 1903]

Simplex

Letter NO — 26 —

I send you sketch of what I think
is right way for Roller feed under Giants
I have made the little agitating Roll non-
adjustable - leaving 24" clear which
will be ok when your opening in
giants is 16" from bottom to bottom,
allowing only 16" pieces to go through.
There will be slivers longer but you will
not have many & they will do no harm
You will notice I have increased
diameter of feed roll to 7 foot 4 in
this will prevent a great trouble we
had at Edison & which we
now have at Canby, to wit.

2

the incoming ore hammers or pushes
the ore so much under certain conditions
that it is forced over when feed
roll is stopped & when feeding there
is an abnormal ~~the~~ load of ore
forced over each time they dump
when not much ore in & this
disturbs all the rolls below &
put a big load on belt. This ^{increased} diameter
will stop this = The ~~roll~~ feed
Roll can be cast in 3 sections, it should
be thick & ribbed - The shafts
are none too large = We had shaft
at Edison on a 4' ~~dia~~ roll 6 7/8" shaft
& this got bent - We used removable

Connected plates, but if you make
 roll of close grained iron $+ 3$ or $3\frac{1}{2}$
 thick it will last a long while -
 plates are a nuisance. -

You will notice I have put where
 ore strikes a steel casting heavy
 ribbed - you will need it as
 men will not carry out instructions
 about keeping hopper full -
 Look out nothing projects in
 bottom of hopper. a bolt head
 sometimes starts a block -
 very trivial things will do the
 same -

~~Edison~~

4.

I may mention that I think you
will have to dispense with the
wooden washer on end of
bolts going through housing on
grain Roller because if it spreads
you have very little
clearance in your Engine
Cylinders there will be
trouble - There is no harm
in leaving it out -

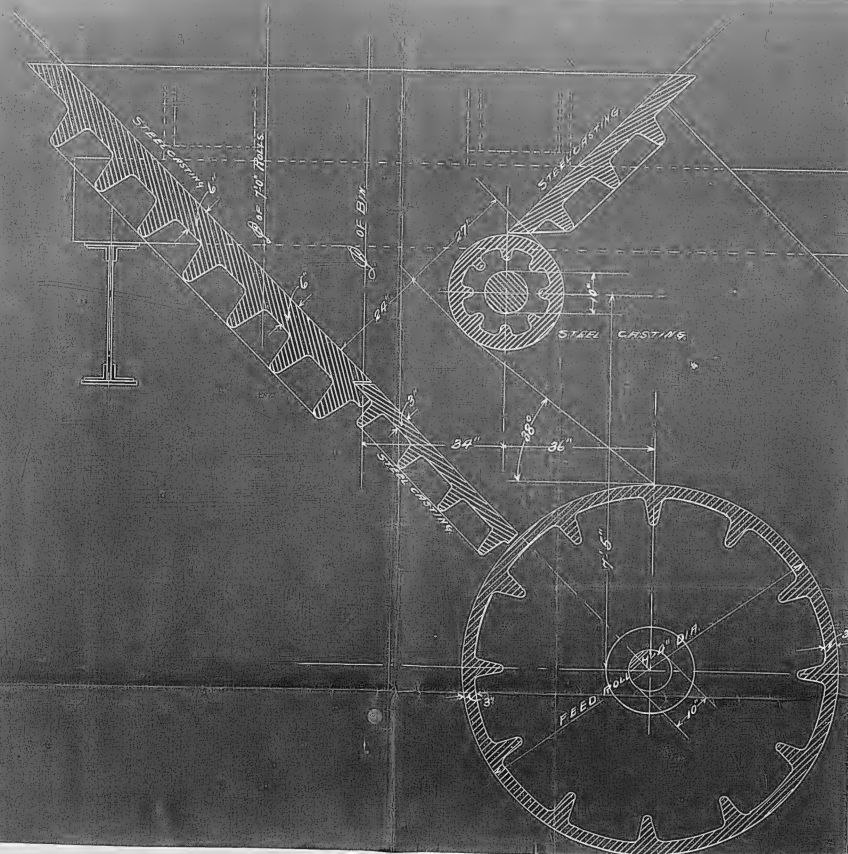
Edison

Dimpkins -

We have not received final
drawings for 3 High rolls;

Edison

[ENCLOSURE]



SKETCH FOR FEED ROLLS
AT
BOTTOM OF STORAGE BIN

4-17-11

11-25-03

Standard Construction Corporation Limited.

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Fitzalan House, Arundel Street.

London, W.C.

December 1, 1903.

No: 42.

THOMAS A. EDISON, Esq.

file -

Dear Sir,

We are duly in receipt of your favour of the 23rd ult., and are extremely obliged for the enclosed blue prints giving us your idea as to the construction of the hopper around the 7 ft. Rolls, and particulars of the delivery chute to conveyors. We will take these up at once, and revise our drawings in accordance with them.

Yours truly,

Standard Construction Corporation Limited,

Wm. Simpson, Jr.
Wm. Simpson

Letter #27 - Dec 2/03
Dumplin -

I send you today blue

#1254
Printers of 3rd 36 inch roll flexible
Wabblers - This is a great
success + gives no trouble
repz is good for 20 to 30,000 times
+ is quickly put in when
worn out = It is very
soft in transmission opening
taking off shocks + I think

✓
That its the only thing you
Can use to take shocks
off of Commutators of
Motors driving rolls

B-1225 & B 1234 are the flexibles used on
~~our~~ our Motors driving Conveyors etc
Leson



3
Dimpkins -

Look out that Bergman uses
Soft Mica in his commutators.
Those sent from Germany for our
Motors have hard white mica
in & we have a dreadful time
keeping machines from sparking -
More than 12 percent of the whole
Mill time is lost, the Mica after
running 36 hours stands up slightly
& with Carbon brushes, one thousand
of inch is sufficient to start a
spark then the spark commences

to roughen the Commutator +
spark increases, then it gets so
bad have to shut down

Sand paper — White hard

Mica is OK for wire brushes
but not for Carbon & its no

longer used here —

Σ

Dimpkins — 5

The idler bearing you sent is defective in respect to oil chain it is absolutely essential that the chain should be easily put in & out while running - you will have to redesign it. There are other things also - I have it set up & am trying to make it oil etc will let you know further about it =

The skip dump motor must be compound wound -

Edwin

Standard Construction Corporation Limited.

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Fitzalan House, Arundel Street.

London, W.C.

No: 42

December 7, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

I am duly in receipt of your letter No: 26, dated November 25th, and am obliged for the enclosed sketch of a feed arrangement ~~over~~ the first five foot rolls. My Father should be back in London towards the end of the present week, and we will take this up with a view to arranging our drawings accordingly immediately on his arrival.

I am under the impression that drawings of the grinding rolls were sent you some time ago, but will look into the matter, and if I find that this was not done, will forward you a set at once.

Yours truly,

Wm. Simpson, Jr.

Standard Construction Corporation Limited.

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Fitzalan House, Arundel Street,

London, W.C.
December 14, 1903.

No: 43.

THOMAS A. EDISON, Esq.

Dear Sir,

I am duly in receipt of your letter No: 27, dated December 2nd, with various blue prints of rope flexible couplings enclosed, for which I am obliged.

My Father has been delayed in Berlin on his way back from Norway, and will not reach London before Wednesday, the 16th. We will take the matters up which are referred to in your letter immediately on his arrival.

Yours truly,

Wm. Simpkin, Jr.

Standard Construction Corporation Limited.

ALL LETTERS SHOULD BE ADDRESSED:-

ENGINEERING DEPARTMENT.

TELEGRAMS: STANCOLLI, LONDON.

Fitzalan House, Strand Street.

No: 44.

*Answered
Jan 15, 1901
London, W.C.*

December 31, 1903.

THOMAS A. EDISON, Esq.

Dear Sir,

*to Florida about 25th but
will be busy from now on you*

Your favours-23, 24, 25, 26 and 27, came duly to hand during my trip to Norway and were acknowledged by my son. *when I am over whelmed*

They have been read and work incorporating, so far as possible, the suggestions made by you, particularly on the *your reference to five grinding* hoppers for the crushing plant, and here I must take occasion *rather as you have said but ask* to thank you for the very explicit sketches, etc. you have forwarded. *Explanations, you will be*

Just so soon as these drawings are completed, they will be sent on to you. *intended to know that one of our 12 inch iron shafts*

I note that the lower end of the delivery chute from the last 36" to the conveyor and from the dryer to the conveyor, is *on five grinder shafted in*

exactly like what I suggested to you quite a long time ago and *two parts - 1st use a*

which you at that time said would not work as it would block up. *removable plate and put on a*

I have before me now a copy of the sketch which I made at the time *uses rope in 40 minutes so*

and it differs in no material respect from the sketch which you *do not contact and how remove*

now send, and which is really the method used by most builders *about not being able to do it*

of conveyors, and I am certain will be satisfactory **2**

I note what you say about dispensing with the wooden washer on the end of the bolts going through the housings on the

Giant Rolls. This we had already arranged to do for the reasons stated by you, as also on the last 3 sets of 5 ft. Rolls.

I am mailing you a photograph of a set of Fine Grinding Rolls which we have just erected and which we shall shortly test for efficiency, power, etc. against a set of Rolls of exactly the same size and with the same kind of plates. I will let you know the result as some outsiders who are building Fine Grinding Rolls with corrugated plates claim they can get exactly the same results with the same size rolls, and that the Rolls cost originally much less and there is no trouble from breaking of the pressure ropes. In this connection would say that the putting in of the loose plate between the couplings does not allow us to get in an endless rope when the one in use breaks. We have also to arrange to get it over the sheave of the pulley attached to the air cylinder, and this little problem we are now working on.

I expect to be in New York about the first week in February and may probably bring with me the revised drawings of the chutes and hoppers for the crushing plant, and other drawings which I wish to discuss with you. You might kindly let me know when you intend to go to Florida so that I can time my visit accordingly.

Wishing you the compliments of the season, I am,

Yours very truly,

Wm. Simpson

**EDISON ORE MILLING SYNDICATE, LTD., AND RELATED COMPANIES
BOUND VOLUMES**

These records cover the period 1900-1908. They consist of letterbooks, experimental notebooks, and other bound items relating primarily to the design and construction of the iron concentration plant in the Dunderland region of Norway. The two letterbooks contain outgoing correspondence by Edison and Herman E. Dick pertaining to the Dunderland project, storage batteries, and cement. Included are instructions from Edison to draftsman William Simpkin regarding the plant and machinery at Dunderland, as well as some comments concerning briquettes. A volume labeled "Experiments" was used primarily by an unidentified author for notes, drawings, calculations, and reports relating to experiments with ores. It also contains one page of notes and calculations by Edison pertaining to a sight-feed experiment. Another volume, used primarily by Simpkin, consists of cost estimates for construction and equipment at the Dunderland works. A third volume, used primarily by Edison, contains notes and drawings concerning the construction of the Dunderland works and operations at Edison's cement works in Stewartville, New Jersey.

Letterbook, LM-281

This letterbook covers the period September 1900-February 1903. Most of the correspondence is by Herman E. Dick; some letters are by Edison and others by John F. Randolph. Included are items relating to the organization, capitalization, and operations of the Edison Ore Milling Syndicate, Ltd., and to the design and construction of its iron concentration plant in the Dunderland region of Norway. Also included are numerous letters pertaining to the development of Edison's storage battery and to Dick's role as foreign agent for the battery. In addition, there are items dealing with the organization of the Edison Portland Cement Co. and the construction of the cement works in Stewartville, New Jersey.

Letterbook, LM-282

This book covers the period April 1902-January 1908, with most of the letters dating from 1902-1904. The letters consist primarily of instructions, sometimes accompanied by drawings, from Edison to draftsman William Simpkin regarding the plant and machinery at Dunderland. Some of Edison's comments pertain to the receipt of Dunderland briquettes at West Orange and to plant operations at the Edison Portland Cement Co. in Stewartville, New Jersey. There are also letters concerning drawings from the New Jersey and Pennsylvania Concentrating Works.

Experiments (1899-1900), Cat. 999

This book covers the period November 1899-May 1900. It contains notes, drawings, calculations, and test reports relating primarily to experiments conducted by James B. Ballantine on ores. Most of the entries are in the hand of an unidentified author, but there is one page of notes and calculations by Edison pertaining to sight-feed experiments. Another note regarding the price and consumption of soda for briquettes bears the initials "T.A.E." Also included is a report entitled "Report of Cement Arch Test No. 3," along with notes concerning a "hematite machine" for Dunderland ore.

Cost Estimates (1901, 1907)

This book covers the periods November-December 1901 and February 1907. It was used by draftsman William Simpkin and unidentified authors. Most of the book consists of tissue copies of construction and equipment cost estimates for the Dunderland works (1901). A few pages, dating from 1907, relate to pattern drawings and the cost of installing giant rolls at the New Jersey and Pennsylvania Concentrating Works and the Carnegie Steel Co.

Standard Construction Corporation, Ltd. Pocket Notebook (1902-1904)

This pocket notebook was used mainly by Edison, probably during the period 1902-1904. Included are notes and drawings pertaining to the design and construction of the iron concentration plant at Dunderland, Norway, and to operations at Edison's cement works in Stewartville, New Jersey. Many of the pages contain references to Edison's correspondence with William Simpkin, chief engineer of the Standard Construction Corp., Ltd.

Standard Construction Corporation, Ltd. Notebook (1903) [not selected]

This notebook was used during October 1903 by an unidentified author, possibly Emil Herter, for notes regarding blueprints for the Dunderland plant.

**Edison Ore Milling Syndicate, Ltd., and Related Companies
Letterbook, LM-281**

This letterbook covers the period September 1900-February 1903. Most of the correspondence is by Herman E. Dick; some letters are by Edison and others by John F. Randolph. Included are items relating to the organization, capitalization, and operations of the Edison Ore Milling Syndicate, Ltd., and to the design and construction of its iron concentration plant in the Dunderland region of Norway. Also included are numerous letters pertaining to the development of Edison's storage battery and to Dick's role as foreign agent for the battery. In addition, there are items dealing with the organization of the Edison Portland Cement Co. and the construction of the cement works in Stewartsville, New Jersey.

The front cover is labeled "Personal Letter Book of H. E. Dick." The book contains 500 numbered pages and an index; it has been used to page 355. Pages 91-92 have been removed from the book. Approximately 40 percent of the documents have been selected. The unselected letters pertain to ore analyses, inquiries about Edison's storage battery, and Dick's personal business and family.

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Sept. 25, 1900.

Mr. J. Hall Jr., Secy.
Edison Ore Milling Syndicate Ltd.,
7 Amberley House,
Norfolk Street,
London W. C., England.

Dear Sir:

I have just cabled you as follows:

"Obsession, London.

We are astounded at allotment. I consented increase
fifty and issue of twenty only. Dick"

Mr. Edison's allotment letter was handed him after I
came over this morning, and we at once saw that instead of issuing
£20,000 (pounds) of new stock, you have allotted the whole increase.
What reason do you offer for this? Messrs. Lawrence or Wallace
never suggested such an amount.

You first talked of issuing debentures to carry on our
prospecting in Norway and I said we would take our proportion.

Mr. Wallace afterward said the Syndicate at the present
time did not have proper property upon which to make such an issue,
and suggested increasing our Capital Stock.

An estimate was then made up of what monies the Syndicate
would require to complete its work of prospecting in Norway, and
£12,000 (pounds) was found to be an outside figure.

#2 J. H. Jr.

Shortly before I left London for Paris, the Directors of the Syndicate held a meeting lasting several hours, and it was agreed to submit a resolution to the shareholders for an increase of the Capital to 150,000 pounds and of this 50,000 pounds, 20,000 pounds was to be allotted to the shareholders of record. No other figures or amounts were mentioned. All agreed that 20,000 pounds was more that could be used but we wanted to be on the safe side. The reason the increase was made 50,000 pounds instead of 20,000 pounds was that Mr. Lawrence said that at some future time we might want to make a further issue, and we did not want to go through this matter of increase again.

We did not exploit this business abroad to furnish the patents, experience gained by excessive expenditures in experimenting, and a great proportion of the Capital also.

During the interval between the meeting of Directors above referred to, and the receipt of Allotment letter today, no one has suggested to Mr. Edison or myself that any change was contemplated in what was agreed upon that day. Capt. Pollen did not mention it while here. Concluding I will say that there is no demand upon the Syndicate for any such sum of money.

Truly yours,

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Sept. 25, 1900.

Messrs. Maguire & Baucus,
5 Warwick Court,
High Holborn,
London, W. C., England.

Dear Sirs:

Mr. Edison has handed me your letters of July 27th, Aug. 2nd, Aug. 22nd and Aug. 24th. You are now aware of the cause of delay in Custom House of pug.

Mr. Edison has been and is now working on pug process, and says that the character of this pug is entirely different from the first lot. The grain is a thousand times finer, as fine as butter and the most powerful microscope does not resolve it into anything. It is also very lean, some carrying no gold whatever and much of it will not go over fifty cents per ton. All of these experimnts take time, and a small model plant will shortly have to be designed and of course this will involve considerable expense.

Mr. Edison says that if you run down the report that another process is out which is a success on the pug, and find that it is true, he will suspend this work and further says that whoever has solved the problem is justly entitled to all he can make out of it.

The information concerning the Sulphides is too general.

#2 H. & B.

A process that would work one deposit successfully might fail on another. The plan to work on in this line is to take a large known deposit, get average samples and fit the process to it. Give price of coal, labor and specific local information. Every detail in a process must be carefully worked out and all this takes time and money.

You see when wild statements are made how it works out. You brought that sample of pug over and said it was a rich sample but there were millions of tons that would average \$8.00 per ton. When a quantity is received for experimental purposes, Mr. Edison finds it entirely different from what was first shown him. The result is that all the work he has done with the first samples is useless unless you can find a large body of similar pug. He is obliged to begin all over again on the process, and the problem now is a hundred times more perplexing, although he believes he can overcome these new difficulties even now, but the pug must go more than fifty cents a ton.

Trusting I have ourselves clear on all points, I am,

Yours truly,

H. G. Wells

Oct. 8, 1900.

J. Hall Jr., Esq.,

Secretary Edison Ore Milling Syndicate, Ltd.,

7 Amberley House, Norfolk Street,

London, W. C., England.

Dear Sir:

I have just returned this morning from a trip in the mountains where I could not be reached by Mr. Edison, and find your cable of Oct. 1st. I cabled you on Sept. 24th upon receipt of your letter of allotment and waited one week for a reply, then was obliged to start on trip. I also wrote you the same day.

There is considerable humor in the way you request Mr. Edison and myself to put up \$110,000 as though it were an invitation to dinner, and I will say that the whole matter of this issue seems to me most extraordinary after settling on an issue of 20,000 when I saw you last. You have raised it to 50,000 without a suggestion or an inquiry as to how we stood regarding it.

We will do just what I agreed when I saw you and no more, that is to take our proportion of an issue of 20,000.

Very truly yours,

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Oct. 8, 1900.

James Dixon, Esq.,
81 Gracechurch Street,
London, E. C., England.

Dear Sir:

In the printed report of the Extraordinary General Meeting of the Edison Ore Milling Syndicate, Ltd., on the 7th of Sept, page 20, I note a statement made by you which reflects upon my associate Herman Ernest Dick, as well as myself. You say that one of "my men" at a Club in Chicago introduced you to Mr. H. R. Dick who said "that he alone had to do with Mr. Edison's affairs." You also said that he seemed to be a most mysterious person. In the first place I will say that I have no man in Chicago. My Dick is a resident of Chicago although he spends but a small portion of his time there and was in London at the time of your visit.

Your Mr. H. R. Dick I never heard of, never had any business relations with him, and he is in no way connected with me.

I would consider it a favor if you would advise me the name of the gentlemen whom you called "Edison's man," who made you acquainted with this H. R. Dick.

Referring to your statement that you could not see me while in America, I will say that there are on file two letters from you only.

In the one dated Tuesday May 1st enclosing Dick's letter of

#2 J. D.

introduction, you say that you are leaving the next day for the South to be absent for four weeks, giving your address in Baltimore until the following Friday. I was away from Orange all that week returning Saturday Evening, consequently could not write you in time.

The other letter was received Tuesday June 12th and in it you say you regret that you will be unable to call as you are sailing the next day on the "Oceanic"

I have met several members of the Syndicate and have always been glad to talk over our affairs and should have been pleased to have seen you. One thing more; I can find no one who ever received a telephone message from you.

Trusting you will see the justice of my making this statement, both on Dick's account and on my own, I am,

Yours very truly,

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October 11th, 1900.

J. Hall, Jr., Secretary,
Edison Ore Milling Syndicate,
Ambley House,
Norfolk Street, Strand,
London, England.

Dear Sir:-

The ore shipment made by Lehmann is in the New York Custom House and has been there for three weeks. It will probably be two weeks longer before we can get it out. All of it is assayed and tested by Government Chemists, ostensibly to see that no fraud is practiced upon the Government, but really to furnish good positions for party workers.

Edison must construct a unit of that type of separation device as would be used in the Norwegian Mill and actually concentrating the ore sent. As this will involve considerable expense, and he desires you to instruct him at once to do this work.

I noticed in the reading of the report of the extraordinary general meeting, that few, if any, of the members of the Syndicate have the remotest idea of this problem. For instance- Mr. Dickson was surprised to hear that they were not using Edison briquettes in Chicago, a thousand miles away from Edison's Mill; within a few hundred miles of the great Masaba deposits and practically water navigation all the way to the Mines. Then he was surprised that he could not find them in use in Pittsburgh, where practically the same

J. Hall, Jr. #2.

conditional sale. The Chairman gave a partial explanation of the problem, but it did not go quite far enough.

There was a great deal made at the meeting of what the briquettes cost Edison per ton and what he gets for them. What it costs to produce briquettes of 68% iron per ton, from ore containing 16 to 18%, is a vital one to the Syndicate. The price he sells them for cuts no figure whatever. There is a fixed price for Bessemer ore at every Port in England; the same as the price of wheat, cotton or any other commodity; so all that the Syndicate is interested in knowing, is what the briquettes cost. What Edison makes or loses here in a Country that is exporting hundreds of thousands of tons of Pig iron, steel, billets, ore and everything *in the iron line* else, cuts no figure. You have your market price, which is considerable higher than it is in this country and you know what Edison can make negotiating for at the prevailing rates for wages; then the problem becomes an easy one to figure as to profits.

The Iron industry in this Country is in a most demoralized state. During the past twelve months when the price of iron was kept artificially high, every Furnace throughout the East - many of them not having run for ten years, was put in blast and huge quantities of ore contracted for on the supposition that the price of iron was likely to remain high for several years. There is no

J. Edgar, Jr. #3.

market for either iron or steel at the present time; practically all the furnaces are closed and it is not a question of price, quality or anything else. The furnaces simply cannot take the ore.

Edison has on hand to-day about 10,000 tons of briquettes and concentrates and is shipping them out at the rate of about 300 tons per day. He has taken advantage of this lull in the business to put in thirty-four Electric Motors in his plant.

This condition of affairs will probably not exist again for fifty years, but it is the condition at the present time. Carnegie threatens to make war upon the rest of the iron men, and I believe he will do it. It looks that way. He proposes to cut the price of steel rails to \$23.00 per ton and everything else in proportion.

It is Mr. Edison's opinion that the ore situation will be so improved that he can start up on January first and run on continuously. In fact, he has been assured of this by Pilling & Crane, his ore broker.

Yours very truly,

J. Edgar

Nov. 2, 1900.

Messrs. Maguire & Baucus,
5 Warwick Court, High Holborn,
London, W. C., England.

Dear Sirs:

Yours of Oct. 10th has reached me here. I have been East for several days with my family, but did not come over to the Laboratory until this morning. The letter I wrote you on Sept. 28th was sent after a long talk with Mr. Edison and after he had shown me many samples of the pug which he had received from you, and he ~~sent~~ the letter after it was written. He has since that time found a new feature in the pug which he could not see in the samples first submitted by Mr. Roubush, and that is this; The greater portion of the ore has nothing whatever in it, but when it is broken there appears to be, however, small spots widely distributed through the pug where the gold is segregated and it was these pieces of rich ore that Mr. Roubush handed him.

He went over the greater part of the shipment, breaking up the pug indiscriminately without finding an atom of gold, and it appears that all of it must be treated to recover the gold ~~instead~~ the richer parts as he first thought. On Monday he commences on another experiment with the pug and I hope to be able to give you encouraging reports soon.

Very truly yours,

H. E. Lick

Nov. 2, 1900.

James Dixon, Esq.,
81 Gracechurch Street,
London, E. C., England.

My Dear Dixon:

Mr. Edison has handed me your letter of the 22nd of Oct. and I note what you say. I am obliged for the way in which you mention me, and can readily see how the reporter made this error, as you yourself say you do not understand the disconnected way in which it was printed.

I presume the gentlemen you met in Chicago was Samuel Insull who I have known for many years. Mr. Edison does not want you to think that he was finding any fault with you, but says he wrote the letter simply to straighten out any misunderstanding that might arise from the reading of the report.

Very truly yours,

November 8th, 1900

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 169

Mr. J. Mall, Jr., Secretary,
 Edison Ore Milling Syndicate,
 Amberley House,

Norfolk Street, Strand,
 London, W. C.

Dear Sir:--

Mr. Edison has received your cable and has already started at work. After a few preliminary general experiments with the apparatus he has previously constructed, he will design and build a bank of ten magnets, which will be a perfect unit of the type as would be constructed for the Mill in Norway; then this bank of magnets can be shipped to London and there demonstrate to our friends at Newcastle, who doubt that the hematite can be separated in a commercial way.

In the meantime, what do you propose doing with Dr. Lehmann? If he can be spared it seems to me it would be just the thing to send him over here that Mr. Edison can refer to him regarding the deposit in many ways. It was our first intention to complete this bank of magnets and then have Capt. Pollen come over, so that he might see for himself just how it was done, but this morning Mr. Edison

November 8th, 19

#2.

suggested that we ship this experimental unit of magnets over to you, together with the pulverized ore etc and I consider it a very good suggestion. He will keep right at it until the work is completed, as the time is now close at hand when something must be done and the chief object of this experiment is to obtain data for the prospectus, as well as make an actual demonstration of the separation.

We will send very shortly, a draft for part of the amount we agreed to take and this will be followed by other drafts at short intervals, until we have paid up in full the amount of the new issue that I agreed we would take when last in London.

Yours respectfully,

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November 16, 1900.

Mr. F. H. Pollen, Manager,

Edison Ore Milling Syndicate,
Amberley House, Norfolk Street,
London, W. C.

Dear Sir:-

I have the Secretary's letter of October 30th to Chicago; your letter of November 2nd. and Mr. Edison has just handed me your letter to Mr. Mallory of the 5th of November, asking me to make a general supply to same, and upon Mr. Mallory's return in about two weeks, every item will be taken up and answered fully by him.

There is one building here devoted to the experiments on the Norwegian ore, and this work is being rushed forward without delay. I doubt if it would be possible to have Mr. Edison go over between now and April first, although he has frequently expressed his desire to see this deposit before the final location of the Mill was selected.

Mr. Edison says, he believes from all the data and reports which he has at hand, that the supply of ore in this one deposit would be sufficient to satisfy the entire English market for foreign ores for thirty years, at its present rate of consumption.

Of course, I realize it would be a happy thing for the

Mr. F. H. Pollen #2.

Syndicate, if Mr. Edison and myself would contribute \$100,000 just now, but as you know, this was not the spirit of the contract when the Syndicate was formed. However, we will contribute the amount previously agreed.

Mr. Edison is desirous of having me remain here during the experiment with the ore, so that I will have a clear understanding of the whole matter; and as there is little to be done just now, until we have our reports, etc., there would be nothing gained by my leaving at the present time.

There has been some delay which was not anticipated when the Syndicate was formed, but no more than is usual with other enterprises of such large possibilities. I realize that you must depend upon us for sound statements that will speak for themselves, and be of such a convincing character as would interest investors. We are fortunate to have at Newcastle, associates who realize the possibilities of this great deposit, and we will undertake to furnish the connecting links which will be convincing beyond a reasonable doubt.

I note what you say about the Norwegian patents and the great stress laid upon this one feature of the promotion. If the

Mr. F. H. Pollen #3.

deposit together with the process is secured, with the experience gained from this side, the business would be established of as firm a foundation as any other business existing to-day.

I have had a long consultation with Mr. Edison regarding the general lines, on which in our opinion a Company should be brought out. In the first place, the Company should be large to ultimately handle this business; that is, I mean with capital enough subscribed to build the Mill, Railroad, etc., etc., but for the present, only enough to be called up to secure the necessary money to complete the purchase of the property.

I notice that you speak about the plans for a Mill, and want to advise you what must be necessary to complete perfect plans. In the first place, a wooden model must be constructed here, perfect in every detail and similar to the one made for the Edison Portland Cement Company. This would cost about \$10,000. Then, detailed drawings must be made (this work would be done here in connection with Engineers that would be sent over by you) and this work would take at least eight or nine months and cost \$30,000 or \$35,000.

You must remember that the Mill at Edison is an experimental plant only; that it is like the first machine brought out by an Inventor in any new line; that it has been evolved from

Mr. F. H. Pollen #4.

nothing and changed repeatedly. Even now, there is being installed at Edison, thirty- four electric Motors to take the place of belts, and all the frame work is being replaced by steel and solid masonry; and this plant was made simply to demonstrate what could be done. Outside of this plant at Edison, the only new plant is the New Jersey Zinc Company, which is giving the very best of satisfaction. Figures will be furnished by Mr. Mallory on his return, which would be convincing to anyone accustomed to assuming ordinary business risks.

Mr. Edison has never considered this plant any more than an experimental Mill, being the first of many Mills to be erected for working the low grade rock of New Jersey, of which there are over sixty-five square miles; neither have I ever made a statement which could be construed into meaning that this was a going business, having large sums of money. It is the men who get into a business at its incipieny, who get large returns. I believe that with the reports, statements, etc., the workings of this plant at Edison, which I will be able to bring over, will satisfy the men of large affairs, who are the type of men we want in this enterprise.



Mr. F. H. Pollen #5.

Every condition at Dunderland is more favorable than at Edison, and the deposit is more than twice as rich, so that only one half of the material will have to be handled, with cheaper labor, etc. and the ultimate utilization of water power as compared with the plant at Edison. Rest assured, that we realize the magnitude of this proposition, and will furnish you what is required from this side.

We are glad to hear from you frequently and hope you will suggest anything that you may consider would be of assistance.

Yours very truly,

November 13, 1898.

Mr. Melville E. Stone, General Manager,
Associated Press,
Chicago, Ills.

Dear Sir:-

Enclosed I hand you a clipping from the New York "Journal",
and beg to say that this man, Gourand, is in no way connected with
me, I having dismissed him for good reasons many years ago. He
has a genius for getting himself mentioned in the Press, and
especially through your different foreign correspondents.

These publications are annoying to me and I trust you
will use your best endeavor to have any future items of this kind
suppressed.

My foreign representative for sometime past, has been
Mr. Herman E. Dick, of your City.

Yours very truly,

Wm. L. Garrison

Enclosure.

January 7, 1901.

The Battery has one third the weight of the present battery used in Columbia Automobiles.

The cost per Automobile will be less than those now used.

The Battery is based on an entirely new reaction in Chemistry and contains no lead.

The Battery is permanent. There is no deterioration.

It does not require any attention after being put in use, and nothing but water needs to be added from time.

Required- A cash payment,

331/3% of the Common Stock.

I Reserve the right to manufacture on a 20 per cent basis over labor, materials and general factory expense. At expiration of one year and having ascertained costs, I am to receive 1/2 the saving that can be made above this, which is to be added to the 20%.

Parties taking over the Battery do so under a license, the title for litigating purposes remains with myself.

Battery to be sold to all Comers at a rate not exceeding 50 per cent above cost to Company. I on the other hand to include all improvements on Automobile batteries for 5 years. To invest sufficient money in factories to supply the market, up to 10,000 automobiles the first year and any amount the second year.

January, 1878, 1901.

Walter H. Wilson, Esq.,

Rockery,

Chicago, Ills.

Dear Mr. Wilson:-

On my return, I find matters have changed considerably. Last week a deputation of Philadelphia people who organized the Edison Portland Cement Company, came over and spent a day, and made Mr. Edison outright a very liberal proposition to take up the promotion of the storage battery. I talked over with him my idea of placing two tenths of the capital stock of the proposed storage battery company in the West, and told him the nature of my conversation with you and Mr. Mitchell. He did not think it was necessary to place all or half in the West, but said that he would be glad to consider when the time came for bringing out the matter.

The Philadelphia people who were here, were very liberal with Mr. Edison on ^{the} ~~the~~ proposition of the Edison Portland Cement Company.

The Cement Company's capital is eleven million, of which two million is preferred and nine million is common. The whole of the nine million common was given to Mr. Edison outright, in payment of his patents, experience, etc. One million preferred has been sold and the money placed in the Treasury, and out of Mr.

Mr. W. H. Wilson #2.

Edison's nine million, he gave one million of the Common to the investors and purchasers of the million of preferred.

There is now in the Treasury one million preferred and one million of Common, which Mr. Edison gave up from his portion. This left Mr. Edison with seven million Common stock, with one million each of Common and preferred, stored in the Treasury. Out of those seven millions Mr. Edison received, he paid commissions, etc., the balance belongs to him absolutely.

His idea of a Company is somewhat on the lines we talked, as regarding the amount of capital stock. Everything is progressing splendidly, but it is doubtful that Mr. Edison will want to do anything until his return from Florida, when all tests, etc. will have been completed. He is pretty well tired out, having worked until midnight every night for weeks, and wants to get away for three or four weeks about the middle of February. When I return to Chicago, I will show you some memorandums Mr. Edison has given me.

With kindest wishes, I am,

Sincerely yours,

Edison



February 4th, 1901.


Herman E. Dick, Esq.,

Dear Sir:-

Referring to Clause fifth in the Storage Battery Contract, executed on February first, 1901, myself being the party of the first part and you the party of the second part, it is my understanding that the said fifth clause in said contract obligates me to assign said patents and applications for said storage battery patents to the proposed Company for all time, and in addition to such assignment I propose to give said Company without charge all my improvements thereon for a period of five years.

Very truly yours,

Thomas A. Edison



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Feb. 6, 1901.

My Dear Mr. Wilson:

Your letter of Jan. 12th to me care Waldorf - Astoria, New York was held by them for almost three weeks, and then forwarded to my Chicago address. From there it was again sent on to New York to me at the Reform Club and just reached me. Mr. Edison is strongly opposed to forming a large company when he commences the manufacture of his battery. He says that might come later when he has known results, and when he can show what he has done.

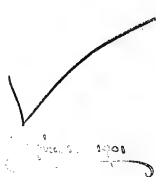
He has notified the Electric Vehicle Company that he has decided to keep the battery, therefore he could not give them an opportunity to investigate it. He proposes to begin the manufacture of the battery about June 1st. He has decided on the above mentioned lines, according to what he says is in his judgement the best plan for him to adopt. He considers my interest in the foreign patents of such great value, that it is not necessary for him to consider me in the American end of the business.

I have been expecting you would be down to New York before this. I have to be here at least another week, but am spending most of my time in New York. Capt. Pollen Manager of our London Syndicate is here and my time has lately been occupied with his business. Shall soon have to go abroad again, and I dislike to undertake the trip at this time of the year.

With best wishes to you and yours, I am,
Very truly yours,

H. P. DeL

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E Windsor Richards Esq.

Holland House
New York City

Mr Dick who has just returned, tells me that
 you are to come to the ~~lecture~~, I shall
 be delighted to see you Monday night, you
 can bring any friends with you, and
 I shall ask you to do me the favor of
 wiring me ~~Monday~~ of Monday will be
 a convenient day for you to come. Mr
 Dick will call at your hotel about
 nine o'clock for you.

Yours
 Thomas A Edison

2 3
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✓
April 18th, 1901.

Capt. F. H. Pollen, Manager,
Edison Ore Milling Syndicate,
4 Amberley House, Norfolk Street, Strand,
London, W. C.

Dear Sir:-

I cabled on Monday as follows: "Important news; don't
"exploit now Company or talk until letter received. Cable order
"Edison make tandem magnets."

This decision was arrived at after a long consultation
with Windsor Richards, Arthur Keene, Mr. Edison and myself, and it
was only after I personally guaranteed that nothing would be said
outside of the Syndicate office, Mr. Lawrence and Mr. Wallace, that
I was allowed to go as far into the matter as I am about to do.

In the first place, this is a great business and we cannot
plunge headlong into the matter of finding the money for this
Company without being armed with the necessary weapons. If we do, we
run great danger of disaster, and it would be a most difficult matter
to pull ourselves together if this did happen.

What we need is an explicit detailed report from Windsor
Richards and this cannot be obtained until Mr. Edison completes his
bank of magnets, which will take between five and six weeks to
complete. He does not want to go ahead on this, (although he has
made a sketch of what it shall be) until he gets your authority by

Capt. F. H. Pollen #2.

cable, so that at no time in the future can there be any misunderstanding about the order. He estimates that this bank will cost about \$5,000.00, as per his previous letter.

Mr. Richards and Mr. Keene left on Monday evening in Mr. Schwab's private car for Pittsburgh, where they will remain for about ten days and then go on to the Birmingham district in Alabama, returning to New York in about two or three weeks. On their return, this business matter will be taken up seriously and I believe the financial arrangements can be practically completed subject to the approval of the Syndicate. Mr. Keene pledged himself to us that every penny of money wanted for this enterprise can be easily and cheaply found in London. What is wanted, is a great Iron Master for Chairman of the Company and I have been assured that we will have no difficulty in having this arranged in a satisfactory manner. Mr. Edison's idea and mine also, is to get a great Iron Master for Chairman, having a strong board to co-operate with him, and then the Syndicate members doing everything they can to assist this board, they should have a complete separate organization which shall be responsible to the subscribers of the new Company.

The Syndicate being vendors, cannot hope to be in absolute control of the Dunderland property, nor is it reasonable to expect

Capt. F. H. Pollen #3.

it. Then again, it will only be a very short time until we are ready to exploit our Cement rights and we must keep ourselves as free as possible to devote our time and energy to this branch, and then there will be other iron properties to handle and exploit.

The Crushing plant section at the Cement Works will be ready to make a test run in seven or eight weeks, in fact, the machinery is being erected in many parts of this plant and covered with tarpaulins on account of the Iron men being so late in delivering the structural iron for the buildings, which cannot be completed before December. This shortage in iron supply will cause a serious delay in the starting of the Cement Works.

Mr. Raision believes the most important thing to do now is to send a competent Hydraulic Engineer to examine the water power and estimate the cost of improving it so that at least 7,000 H.P. could be obtained for the first Mill; then later on more improvements might be made to increase the power, but it is going to be a very important question as to whether this first Mill shall be operated by steam or water power, as it would take at least a year after the order was placed to get our Allis Engines. He says the Hydraulic Engineer to send is Turottini, of Geneva, Switzerland. He is the Engineer who designed the Niagara water power and Edison knows him very well and says he is not an expensive man. We also want in addition an appended report of the estimated cost for the complete utilization of the whole amount of power.

Capt. F. H. Pollen #4.

Mr. Edison also wants your authority to put one Draftsman on the working and laying out a rough general outline of the at Mine and sea. He has already made pencil sketches of what this should be. Then, after Layman had given him a contour survey of the land upon which the Mill would be erected, he will start the construction of a wooden model, always keeping up with the plans, and by the time the railroad was completed, everything would be well in hand for the erection of the Works.

Mr. Edison has gone into details with Windsor Richards, Arthur Keene and also with Mr. Ainsworth and a consort delegation who were here yesterday, and has amazed them by stating that based on his experience at Edison, he would be able to put this ore f.o.b. vessels for \$1.50. This has simply amazed these people and I can see that they are greatly interested. After Mr. Richards and Mr. Kren's return, I am going to take them in hand; go up to the New Jersey Zinc Works, to Edison, N.J. and over to Lebanon, Pa., where they are crushing 1,000 tons of iron ore with one of Mr. Edison's Crushers, and shall also spend a couple of days with them at Stewartsville. This will clinch the whole matter and in the meantime, we will rush the construction of that bank of magnets and put it in operation here and then have it boxed up and shipped to London, where we will make an exhibit if necessary, and further, should it



Capt. F. H. Pollen #5.

be necessary, Mr. Edison and I will come over for one week.

The point I have tried to make in this letter, is for the present we have nothing to talk about and therefore, should have nothing to say until the time for action comes. Mr. Keene and Mr. Richards both say that Prof. Galloway is a coal man and any report from him concerning iron properties would be of no effect among iron men; that he is a very good coal expert and a very nice gentleman, but reporting on iron ores was foreign to his business, and if this is so, it would simply be a waste of money to send him to Norway.

Yours very truly,

Chester

✓
April 18th, 1901.

Mr. Arthur H. Pollen,
185 Fleet Street,
London, England.

My dear Arthur:-

I have written a very important letter to the Syndicate to-day, which I wish you would see, as Mr. Lawrence must be in the heat of his campaign. I think you will agree with us here that it is the wisest thing to do for the present. This matter is a huge piece of work and it wants to be done right.

I enclose report of The General Electric Company which might interest your Father-in-law, as we had some talk regarding this while I was there. We have been entertaining all the big iron men here this week and I am leaving for home to-morrow.

Trusting that, ^{Mr.} Lawrence will be successful and with best wishes to you and yours, I am,

Sincerely yours,

H. P. Dilla

(Enclosure)

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May 7th, 1901.

My dear Lawrence:-

I have just returned from Chicago and find your favor of the 13th ult., also copy of Sir David Dale's letter. I presume you have seen the letter written to the Syndicate, in which I gave the result of the visits of Windsor Richards, Arthur Keene, Ainsworth, etc. I do not believe that we are quite ready to go ahead with this matter, certainly not until we get the reports of Windsor Richards and have completed the bank of magnets which will be forwarded to London. I am expecting Mr. Keene and Mr. Richards here shortly, and when I see them, I shall pin them down to something definite.

Mr. Keene assured Mr. Edison and myself that there would be no difficulty whatever in finding this money under certain conditions and he impresses one with the fact that he understands fully all that he is talking about. Mr. Edison was greatly taken with Mr. Keene and Mr. Richards and believes that we should work with them as much as possible without alienating any of the other iron men we may desire to bring in, and believe it would be good policy to advise Sir David that when we are prepared to talk business, we would be glad to consider him, without letting him know that Keene and Richards are intensely interested, as we can see there is more or less jealousy between these two groups of Iron Masters.

Mr. Lawrence #2.

I am ready at any time to follow this matter up to a successful conclusion.

Wishing you success in your coming Election, and with best wishes to all, I am

Sincerely yours,

MR. Joseph Lawrence,
2 Whitehall Court,
London, S.W.

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May 7th, 1901.

Capt. Pollen, Manager,
Edison Ore Milling Syndicate,
Amberley House, Norfolk Street, Strand,
London, W. C.

Dear Sir:-

We have yours of April 23rd and are pleased to see that everything has been closed up properly. I just returned from Chicago yesterday and learn that the steel castings for the magnets are a little slow in arriving. We will have one here to-morrow and the balance will follow by express. It is rather a difficult matter to get these castings just right and there is only one concern that Mr. Edison was willing to employ and they are rushing this work.

I expect Windsor Richards and Mr. Keene on here very soon. We are glad to note that Dr. Lehmann is on the way; he will be instructed as to the operation of this bank of magnets and will in all probability take the apparatus back to London with him.

Rest assured that we will hurry matters forward as fast as possible.

Sincerely yours,

May 10th, 1901.

Lord Kelvin,
The University,
Glasgow, Scotland.

My dear Lord Kelvin:-

I am in receipt of an invitation from J. D. Cormack, Secretary, to attend the International Engineers Congress early in September. I notice that you are connected with the Association, and if time permitted, I would be glad to accept, but I shall be busier than ever this year, therefore, shall be obliged to decline.

I trust that you are in good health and hoping to have the pleasure of seeing you on this side, I am

Sincerely yours,

Thomas A. Edison

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May 10th, 1901.

The Edison Ore Milling Syndicate,

4 Amberley House, Norfolk Street, Strand,


London, W. C.

Dear Sirs:-

We are sending by United States Express 32 briquettes made from the Dunderland ore, 16 magnetite and 16 hematite. These are all right for phosphorus and you had better destroy the old briquettes you have.

Dr. Lehmann is here and hard at work.

Truly yours,



May 16th, 1901.

My dear Mr. Wallace:-

Mr. Dick handed me your book when he returned from London and I have neglected acknowledging its receipt. I have gone into it carefully and congratulate you on the good work you have done.

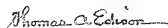
With best wishes, I am,

Sincerely yours,

Roger Wallace M.C.,

3 Raymond Building,

The Temple, London.



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May 14th, 1901.

Capt. F. H. Pollen, Manager,
Edison Ore Milling Syndicate,
Amberley House, Norfolk Street, Strand,
London, W.C.

Dear Sir:-

Please write Mr. Edison authorizing him to keep two
Draftmen for the present on the preliminary plans for Dunderland.
Dr. Lehmann will explain when he returns. He will also give you
good reasons for what seems to be a delay in getting out the bank
of magnets.

Yours truly
Hedra

72
85 ✓

May 24th, 1901.

Capt. F. H. Pollen, Manager,
Edison Ore Milling Syndicate, Ltd.,
4 Amberley House, Norfolk Street, Strand,
London, W. C.

Dear Sir:-

I enclose letter from Mr. Lockie, of Newcastle, and also a carbon copy of my reply.

Replying to Mr. Hall's letters of May 11th to Mr. Edison and myself, and also quoting paper read by Mr. Grearson, will call your attention to a few paragraphs on page six, which will stamp the Author among practical Iron and Steel men, as totally ignorant of the subject he endeavors to exploit. He states that Mr. Edison's briquettes are porous, which unfits them for use in the Blast Furnace. If they were not porous, they could not be used and it has cost Mr. Edison a great many thousand dollars to learn how to make them porous. Any iron master can give you the same reply. He also passes by lightly necessary machinery, etc. for crushing. If he knows where this can be procured, he can have some very strong firms give him a good retaining fee. It looks like an advertisement to me for Mr. Strong and his briquettes.

I enclose a report made Mr. Edison by the proprietors of the Blast Furnace where the briquettes were used, which defines this question.

Capt. F. H. P. #2.

The first magnet made from the steel casting, instead of the soft iron core, more than justifies Mr. Edison's expectation, having a "pull" from 25 to 30% greater than his previous magnets. This will allow him to use less magnets than he originally intended and the work will be pushed forward as rapidly as it is possible.

Dr. Lehmann will tell you of the talk we had concerning an Engineer to make the survey in Norway. We do not believe the best results can be obtained by using an English Railway Engineer, for the reason that road beds are built so expensively in England, they do not have the training that Engineers do in this Country. I went to the New York Central Railway to learn who built their road through the Adirondack Mountains, as this is about the character of work to be done in Norway. The President and one of the Directors, who is one of the Vanderbilts, sent out Mr. H. Roberts, who they said was the best Engineer for that class of work in America; that he had given them perfect satisfaction and could be depended upon in every way. Mr. Edison went into this matter very carefully with him and he offered to go and survey that road, remaining three months, for Five Hundred (\$500.) Dollars per month and expenses, and I consider it very cheap. As you are in ignorance of what was decided upon when Dr. Lehmann was here, I

Capt. F. H. P. #3.

cannot cable you until next Monday, when I will cable regarding this matter. Mr. Roberts is ready and willing to go at once and he will probably take his wife.

Windsor Richards and Arthur Keene will be here again Saturday and the first of the week.

Truly yours,

HC

(Enclosure)



May 24th, 1901.

Messrs. Mac Rae & Sinclair,

St. Johns,

New Brunswick.

Dear Sirs:-

Replying to yours of April 30th, which has been referred to me by Mr. Edison, I beg to say that the situation as you describe it is very attractive. The new Edison battery will make the enterprise commercially profitable, as it will receive its charge in a short space of time and there is absolutely no deterioration. Mr. Edison is much interested in its projected enterprise, but it would be impossible for him to give any personal attention to the project and he could not become a shareholder for the reason that he never goes into any outside enterprise.

He will be pleased at any time to meet you here and talk the matter over with you, although it will be sometime late in the Autumn before any batteries can be delivered, on account of the necessity of completing the machinery for their manufacture.

Truly yours,



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May 24, 1901.

Sächsische Bankgesellschaft, Quellmalz & Co.,
Dresden,
Germany.

Dear Sirs:

Upon request of Mr. H. E. Reddlien, I answer his letter of the 11th of May and address you.

At the present time we are not ready to exploit the Foreign business. The works are being completed and the automatic and other machines are being constructed to manufacture the battery commercially. I can give you, however, the information you ask for. The new battery will weigh about 54 pounds per horse power-hour and the measurements will be 11 in. high and 80 square inches surface measurement per H. P. On account of it being able to be rapidly discharged as well as charged, almost any speed can be obtained.

We could not give any options on this battery.

Truly yours,

H. E. Reddlien

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✓

May 24th, 1901.

Mr. E. Windsor Richards.

Dear Mr. Richards:-

I am in receipt of yours of yesterday from Philadelphia and I shall call on you at the Holland House, perhaps on Sunday^{at 6 P.M.}, so that we may talk over the best way to employ your time on Monday next. Mr. Edison and I both believe that you should spend that day at Stewartsville, when you can see the Cement plant and the Crushing Machinery, which ~~machines~~, however, is not now running, but it will give you, I believe, a general knowledge of what the Crushing machinery is. As you only have one day at this time, we cannot go to see the New Jersey Zinc Company or over to Lebanon to see a small crushing plant there, but I am sure that the experience you get in Stewartsville on Monday, will give you a more comprehensive idea of what Dunderland Plant will be than any other single plant you could see. Mr. Edison says he will go up with us.

With best wishes to you both, I am,
Sincerely yours,

J. E. D.

To Mr. E. Windsor Richards,
Holland House,
New York.

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May 29th, 1901.

Capt. F. H. Pollen, Manager,

Edison Ore Milling Syndicate, Ltd.,

Amberley House, Norfolk Street, Strand,

London, W. C.

Dear Sir:-

Mr. Edison and myself have had another interview to-day with Mr. H. Roberts, the Engineer I cabled about several days ago. It is very important that we secure this man, as he has exceptional qualifications for this work. We have a written proposition from him offering to furnish the necessary engineering tools and instruments to equip one full core for Five Hundred (\$500.) Dollars per month salary, and living and travelling expenses. This man is of a very high type and were it not for the fact that he never has been abroad and sees in this short engagement a possible opportunity to enlarge his field, we could not get him for ten times this salary. He is broad enough to see that he will come in contact with men of affairs, outside of his own particular field and is anxious to go. Mr. Edison and myself have looked him up and he is endorsed by the highest Railroad officials in this Country, as being the best man for this particular work. We cannot keep him in suspense, as he must soon know what he is to do, and I would ask you to send Edison a cable upon receipt of this letter, whether this arrangement is satisfactory to the Syndicate. He is in a position after a survey

F. R.P. #2.

is complete, to build the road on contract, or build it for you under your direction. You will find him most intelligent and up to date. Don't fail to cable us and we will send him along at once. He will bring his Wife with him.

Mr. Keene and Mr. Richards were at the Cement plant with me on Monday and yesterday I had Ainsworth and his group up there. To-morrow Ainsworth and his group come over here to spend the day to talk business. After I have heard what they all have to say, I will write you a full and complete letter so that you may be posted. It begins to look to me as though they were running after us now instead of our going to them.

Sincerely yours,

J. B. Keene

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May 31st, 1901.

J. Lawrence, Esq.,
185 Fleet Street,
London.

My dear Lawrence:-

Yours of the 16th of May at hand and Mr. Edison and myself again congratulate you on your victory. I see that there is something about the Dunderland property which you want to talk over with me privately and just as soon as the bank of magnets is complete, we will send it to London with the man in charge and I will come over to be there as soon as it is erected.

Mr. Ainsworth, Managing Director and Mr. Scott, Engineer of the Concerly Company, have gone into this matter most thoroughly and a report from either one of these gentlemen would be as well worded regarding our interests as though we wrote it ourselves. When they were over here a month ago, they saw the original magnet. Yesterday they again spent the day here and this time upon showing them the magnet and not telling them that it was the new magnet made from the special steel core which Mr. Edison devised, they at once saw the superior article of the present magnet over the previous one and asked what had been done to improve it. This shows the wisdom of going slow but sure on this bank of magnets and now everything is being rushed to complete it.

Mr. J. L. #2.

The pull of the new magnet is at least 30% more than the old one, which ~~was~~ ^{seems} considered by everyone to be perfect. Consequently, we need ~~fewer~~ magnets in the Mill and they will be very much cheaper to construct.

Windsor Richards and Arthur Keene are coming ^{over} again. and Mr. Ainsworth says that he will bring the whole of his Board to London as soon as our bank of magnets is erected. In the meantime, Mr. Edison and myself both believe that our policy should be not to quote these gentlemen in any way, but to reserve all our ammunition until we are ready to fire the gun.

The Crushing plant, ^(Cassidy) especially pleased Messrs. Ainsworth and Scott and they say they are convinced that the process in every way is a great success. Mr. Ainsworth is very familiar with the Dunderland deposits and I see he knows more about their value than perhaps anyone outside of ourselves. He tells me privately that Prof. Lewis and he have had many confidential talks regarding this deposit. I believe that the whole money required can be furnished and will be furnished by the Iron trade upon terms that will be equitable to the Syndicate. I have not gone into this matter in any way with these gentlemen, all that I have been showing

Mr. J. L. #3.

them was the mechanical and commercial side, the financial end has not been touched upon, although I have been urged by all of the gentlemen to give them an idea of what the Syndicate would do.

I am leaving for Chicago to-morrow to spend one week, but I shall return to spend several days with Windsor Richards and Keene before they sail on the 12th.

With best wishes, I am

Sincerely yours,

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June 10th, 1901.

Messrs. Morgan, Harjes & Co.,

Paris,

France.

Gentlemen:-

Supplementing the letter that Messrs. J. P. Morgan & Company wrote you referring to the Edison Storage Battery, which was written during my absence from the Laboratory, I beg to say that it will be some considerable time before the battery will be exploited abroad. The first factory is now being equipped with automatic and special machinery for manufacturing this new battery, and it will probably be at least four months before batteries in any quantity are turned out commercially, and it is our intention not to do anything abroad until we can demonstrate by actual commercial results just what these batteries can be produced for. It may be the beginning of next year before we will seek to exploit the battery in Foreign Countries.

The writer has had for several years a letter of introduction to your firm from Mr. Edison, but has not presented it. I will be pleased to at least show you what this battery is before any definite arrangements are concluded for France.

Very truly yours,

H. E. Jones

✓
June 17th, 1901.

Joseph B. Baucus, Esq.,
5 Warwick Court,
High Holborn,
London, W.C.

Dear Sir:-

Your extraordinary letter of the 8th of June received this morning. When and where did you get authority from Mr. Edison or myself to open negotiations with anyone for the Storage Battery? When I saw you last in London, you asked me if there was any truth in the rumor that Mr. Edison was working on a storage battery, and I said there was, but I had said nothing about it, as it was yet incomplete. You asked me if there was any way you could help us in the matter when the proper time arrived, and spoke particularly of the Coates people, saying that through you they had invested considerable money in the New Jersey business at Ogden, and asked that they might be allowed to come in in some way should a Company be formed in England for the manufacture of the new storage battery, if the battery should prove successful, and I said that I would report your wishes to Mr. Edison, which I did. Mr. Edison has his own views on what he wants done with the battery in proper time, and you are taking a most peculiar course to convince him that you could be of use to him.

Mr. Edison has been annoyed enough by Col. Gouraud in

J. D. P. #2.

Letters of this kind without additional worry.

We are receiving hundreds of letters, cables, etc. and to each inquiry, we say that we are not ready to offer the battery to anyone.

My advice to you, in order that you may not lose your good standing with the people with whom you have talked, is to put the matter before them just as it stands.

Yours very truly,

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June 21st, 1901.

Capt. F. H. Pollen, Manager,

Edison Ore Milling Syndicate, Ltd.,

4, 5, 6 Amberley House, Norfolk Street, Strand,

London, W. C.

Dear Sir:-

Since your letter of the 3rd inst. was received, Mr. Anderson has been here and Mr. Edison gave him a letter to Mr. Darling, Constructing Engineer at Stewartville, to let him see anything he desired, and I presume he is now there.

He informs us that the Cement Combine of England, of which his Father is Vice Chairman, has made rather a muddle of introducing Rotary Kilns. On account of the primitive way in which they grind cement, they have met with great difficulty in grinding the product of the rotary kiln. He says that they are obliged to underburn, for if they burn it in a proper manner, it becomes so hard that their grinding machinery will not grind it, for all other appliances for pulverizing cement grind, except ours and ours crush. The harder and more brittle a product is for our system, the better results we obtain.

We note that you are still uneasy and perhaps suspicious regarding the Edison briquettes. We infer this is because a nobody got up and made a mis-statement which only puts him in a ridiculous position before the Iron Trade, who are the real judges in this

P.H. P. #2.

matter. You can without difficulty procure from Mr. Ainsworth, Mr. Richards or Mr. Keen a statement which will be of value to you as against the sputterings of an unknown. We do not want to furnish you the complete Stanhope reports. In the first place, we are not supposed to have any report. A copy was sent us to read made by the Engineer in charge to the owner of the Furnace and we had a duplicate made from it and there are many things in this report which go outside of the stability of briquettes, and portions of the report are unfavorable, not on account of using briquettes, but on account of the Furnace being an old type Furnace and lacking in blowing capacity, etc., etc., and this report were it to leave our hands would reflect upon persons entirely outside of those interested with ourselves and could do no good; would undoubtedly lead to much trouble and put us in a discreditable position with our friends.

We have written to the Allentown Furnace, who use more briquettes than any other Furnace, to make us a report regarding their use, and as this is a modern Furnace, well equipped, it will be most satisfactory and we shall forward on its receipt; but we do not advise you to make public these matters at the present time, as the people you must rely on are men from your side and have been over here investigating on your account, and not bring any people

F.H. P. #3.

outside, at least not for the present.

As previously advised you, Mr. Edison will sell a roll exactly like the one in use at Lebanon, for \$3,000. here. There will be some additional charge for putting on the plates, as at present we do not know the size they wish to crush to; but if they will correspond with the Lebanon people, who fitted their own roll to accommodate their own particular ore, I am sure that they would be pleased to advise them as to what it cost them to put on the necessary plates. It will not be a large expense and can be done by the Morris County Machine & Iron Company, but the buyers will have to bear this additional expense.

By January first, it is expected the Cement plant will be in operation; then in addition to the New Jersey Zinc Company can be shown a crushing plant capable of treating any kind of ore and will be the model crushing plant of the World. This you will then have to refer to and can be personally visited and inspected by the Mining men on your side. I hope that Sir Hiram S. Maxim and as many other eminent men who can will go into this sort of business, then the World will appreciate what Mr. Edison has accomplished; but not until then. This is a business that does not require a temporary effort or newspaper boom to carry through. If the Company should now fail with the support that will be given it by Windsor Richards,

F.H. P. #4.

Arthur Keen and Mr. Adnsworth, it would show that all this cry about the British Iron interests needing additional supplies of ore, was a farce. Mr. Edison and myself have been personally assured by two different groups that the money would be promptly forthcoming and I do not believe it will be necessary to rush into public print to find this money.

We note Patterson and Stead's analysis of ore briquettes and cement rock. The phosphorus in the Hematite is a little disappointing, but when one understands the primitive experimental methods we have used here, it is not to be wondered at, besides taking the low phosphorus in a low magnetite, the two ores combined are away below the limit in phosphorus.

Mr. Edison was very much interested in the assay of cement rock and he has had his Chemist work out three mixtures, any one of which will produce a high grade of cement, and we herewith enclose table of said mixtures.

All the castings have been received for the magnets and they are well underway, most of the magnets being completed. Mr. Edison was obliged to change the design of this bank of magnets on account of showing the separation of the magnetite which Mr. Keen insisted upon showing, so as to make the process complete. It will take some little time to erect this construction in London,



P.H. P. #5.

and Mr. Ballantine will go over and attend to this part of the work. It promises to be rather a huge affair and will weigh perhaps fourteen tons, but it will be complete.

I am leaving in a few days to take a little rest up in the Country, but all your matters will have prompt attention.

Truly yours,

✓
 July 2, 1901

August Belmont & Co
 New York City

Gentlemen:

Referring to my
 talk over the telephone with
 you Mr. Davidson I ask that
 you kindly write an address
 to 104 Lake St, Chicago saying in
 substance what Mr Davidson
 said over the phone—that you
 did not care to talk any
 of the Edison Storage Battery
 Bonds and quietly oblige

Truly Yours
 W. C. Field

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October 7, 1901.

Arthur Keen, Esq.,

c/o London City & Midland Bank,

Lothard Street,

London, E.C.

My dear Mr. Keen:-

I am here in Orange, but Mr. Edison thinks it best for me to remain a week or two, so as, if possible, to give me the complete data of the cost of railroad, etc. etc. We are expecting to hear by every mail from our Engineers and from Dr. Lehmann. He does not believe that I will lose any time, as it will be several weeks before the magnets can be erected in London. You may run across Mr. Lawrence in the meantime, and as you know, he has been here recently.

I cannot say just what day I will sail at present, but it will be very soon. I mentioned to Mr. Edison that I was about to write you and he asked that he be kindly remembered to you.

With best wishes, I am,

Sincerely yours,

J. E. Dick

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October 28th, 1901

Mr. Conner, Esq.,

Marquette,

Michigan.

Friend Conner:-

I arrived last evening and with your letter in my pocket as a reminder, I looked up the piece of copper ore you gave me before leaving the Lodge, and found that it had not been assayed. Mr. Edisor examined it and said there was both copper and nickel in it and it appeared to be rich. He said if he had a little more of the ore, he would go into a thorough assay and also work out a system of treating the ore, provided there was enough of it to pay him to go to this expense.

Now, what I want you to do, is to write Mr. Edisor just how much of a body of this ore you have seen; its width and whether you have possession of this property, and if not, how it could be acquired, and so that, all the particulars you can give him and if this satisfies him, he will go ahead and work out the problem, which will take some few weeks.

In writing a statement to Mr. Edisor, be sure you state exactly what you know to be a fact yourself and not hearsay and with your experience that you have had in that Country, you ought to be able to give Mr. Edisor an intelligent outline of the whole proposition.

E.C. #2.

I am sailing on Thursday and will be back by Christmas.
If there is anything in this proposition, you had better keep it
to yourself until we can advise you just what is best to do.

With best wishes to you and Mrs. Copps, I am,

Sincerely yours,

Wm. C. Cope

Oct 29, 1901

My Dear Mr. Dick

This will introduce Mr. Sherman Dick
who is interested with me in connection
with my new Storage Battery in
Europe, He will explain about the
battery

Yours

J. A. E. Smith

Jan. 3, 1902.

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Steve Albright, Esq.,
Room 28, Hotel Cecil,
London, W.C., England.

My dear Steve:-

I have yours of the 14th and also one of later date, and instructed the office in Chicago to pay your draft before I came on here last Tuesday.

I have not been feeling so very well for a few days in Chicago, but was obliged to come down here to meet some English Engineers who are returning Saturday. At present, my plans are to sail on the St. Louis on January 15th.

Referring to Mr. Hawley, Mr. Edison says that he met him once only, but not at his Country home, and that he believes he had something to do with the franchise of the Erie ^{Western} Railway, in connection with Senator Platt, but that he knows nothing whatever about him and he has always understood that he was a promoter, pure and simple. I learn from other sources, that he stands very well with Senator Platt, but I can get no further information regarding the other gentleman you mention.

Zach Hofheimer seems anxious to hear from you and I told him that my impression was you had written him, but he said he never received a letter from you. He don't know what to do about your office and I believe it would be only fair to him if you

S.A. #2.

would write him. I explained to him that at my suggestion you remained over there until my return and then you might know definitely what your plans would be.

Yours very truly,

H. E. Quinn

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Jan. 3, 1902.

Edison Ore Milling Syndicate, Ltd.,
Amberley House, Norfolk St., Strand,
London, W.C., England.

Dear Sirs:-

I enclose you the original letter from the Crane Iron Works, as requested in yours of December 14th, also a copy of Mr. Edison's letter requesting a report on the briquettes. Please return this letter when you have finished with it.

Mr. Edison answered your cable requesting Lehmann to return, saying that he could not spare him quite yet, but in a few days he hopes that Lehmann will have finished his experiments here, so that he can return and see that the magnets in London perform their work properly.

I enclose herewith copy of Draft Prospectus with certain changed suggested by Mr. Edison.

The Engineers are returning on Saturday on the "Kronprinz" and I believe they are perfectly satisfied with what they have seen here. They are bringing with them certain reports and estimates in detail, and as we did not have time to prepare duplicate copies, we will forward to you by next Steamer, copies of what we have furnished them and also copy of their letter to us requesting certain specific information.

W.O.M. S. #2.

I left Chicago on Monday and have spent this week with them, but am hardly well enough to leave on Saturday, the 4th., besides, on account of my illness in Chicago, I left undone a lot of work which I must finish before I return. From the 4th inst. until the 15th, there is not a Steamer sailing, excepting some small slow ships that I would not risk the crossing upon; so that it will be almost impossible for me to leave here before the 15th. on the St. Louis. This season of the year all the large Steamers are taken off for a month or two and I do not care to risk the discomforts of a small Steamer at this time of the year.

I am sure that we will have the phosphorus problem solved perfectly satisfactory and I know that it will create a great deal of additional interest in this enterprise when the last samples sent by Mr. Edison have been assayed and found to contain practically no phosphorus whatever. Mr. Edison says, to be on the safe side, he can estimate the cost of this additional treatment for the elimination of the phosphorus at about ten pence per ton, instead of four to five, although the actual cost will perhaps be less.

Yours very truly,

H. C. Dick

(Enclosure)

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6/11/02/HEED/L

Captain F. H. Pollen, Manager,
Edison Ore Milling Syndicate, Ltd.,
London, England.

Dear Sir:-

Mr. Edison has referred yours of the 30th of May, regarding gold crushing, to me for reply, having made the necessary notes, which I enclose.

Mr. Edison lays great stress on the fact that with his system of crushing, there are so few fines, which is the terror of all gold mining Companies in Africa. It makes limes which are hard to treat and is a great objection in every way.

I am pleased to note the progress on the railway and I am very glad to hear that Mr. William Rhoads has been elected a Director of the Three Companies.

Mr. Edison says it will hardly be necessary to send ten tons of ore; that he can experiment equally as well with one ton and he would be most pleased to receive it, and promises to give it prompt attention.

I enclose a letter received from Mr. C. E. Hall, No. 58 Foster's Buildings, High Street, Sheffield. He has been informed that same has been referred to you.

Yours very truly,

(2 Enclosures)

6/11/02/HED/L

W.D.Heyne, Esq., Chairman,
Liverpool Warehousing Co., Ltd.,
28 Exchange St., East,
Liverpool, England.

Dear Sir:-

Your favor of the 30th of May to Mr. Edison, has been referred to me, as I attend to all Foreign business.

It is my intention to organize an English Company for the manufacture of the Storage Battery, just as soon as we can determine here by actual results, all expenses incidental to its manufacture.

I have just returned from London, having brought out the Dunderland Iron Ore Company, and it is probable that an English corporation will be able to deliver Edison Storage Batteries, in say, one year from this date. All the problems are solved and it is only a question of the time it will take to complete the special machinery necessary for their manufacture.

I have filed your letter and will advise you, as requested.

Yours very truly,

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✓
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5/11/02/HED/L

Edison Ore Milling Syndicate, Ltd.,
Amberley House, Norfolk St., Strand,
London, W.C., England.

Dear Sir:-

I cabled you yesterday not to return the magnets. Mr. Edison believes that it would entail a large amount of expense and it would be well for you to keep the magnets for other purposes.

After a conference with Mr. Edison, Ballantine and Simpkin, it was determined that on account of the great expense of the magnets for Dunderland, and in fact, the magnets being the crucial part of the whole operation, it was thought best to erect here, one unit of just what would go to Dunderland, have everything thoroughly tested and cheapened as much as possible, without interfering with their efficiency, and when finished here, it could be used as a pattern.

Mr. Simpkin is getting along very well and everything is progressing most smoothly and satisfactorily.

After dictating the above re magnets, it occurs to me that it is not a matter for the Syndicate. I wish you would have this brought before the Dunderland Board, if you consider it necessary, as it is a matter, of course, for the Dunderland Company to pay for. It will be about four weeks before the complete

E. O/M. S. #2

briquette oven is finished; but I have great hopes and a firm belief that it will be a splendid success. Simpkin is very much taken with it and Ballantine also. From results already obtained, it does not seem possible for anything to come in the way of its success. The entire expense of bricking would be one shilling and the saving in the erection of the briquetting plant would be more than \$175,000.

Simpkin will bring over everything necessary to complete the design in London, and in fact, part of the plans he has in such condition at present, that he could invite tenders for them.

I expect to be here for sometime yet and then I shall go up to my Country place, where I hope to remain undisturbed until September first, at least.

With kindest wishes to you all, I am,

Sincerely yours,

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June 16, 1902.

S. Bergman, Esq.,
23 Oudenarder Strasse,
Berlin, Germany.

My Dear Bergman:

I today cabled you to pay W. N. Stewart, who will call on you and with whom you are acquainted, a thousand marks. This is all you need to know. Pay him the money and I will forward it to you. Let him talk all he wants to, but you can truthfully say that you know nothing except that you had a cable from me to pay him the money.

Everything is going splendidly here. With kindest wishes,
I am,

Sincerely yours,

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June 16, 1902.

Dr. Giorgio Finzi,
c/o Biroscchi Finzi,
Milano, Italy.

Dear Mr. Finzi:

I have yours of the 26th of May and beg to say that I arrived here about a month ago and after spending a few weeks with my family, am in Orange again and will be for a short time.

Before this letter reaches you you will have undoubtedly heard of the first test Mr. Edison made of the battery. Within a week five automobiles will be on the road and each will have to cover a distance of 2000 miles over all kinds of roads and under all conditions.

If these tests are satisfactory to Mr. Edison, the battery will be offered for sale in little quantities, the output being increased from time to time, as additional machinery is completed until the full capacity of the present factory is reached, which is about 400 cells.

I expect to go abroad the first of November to exhibit the battery but in the mean time I shall write you and if you deem it advisable I think I could get Mr. Edison to send over one cell for you to test before I arrive.

With best wishes, I am,

Sincerely yours,

June 18, 1902.

Countesse Ludmilla Bobrinsky,
153, Rue de la Pompe,
Paris, France.

My Dear Countess Bobrinsky:-

As the foreign end of the storage battery business is in my hands, Mr. Edison has turned over to me your favor of the 29th of May, and in reply I would say that the American Company expect to be turning out a limited number of batteries in about two months, increasing the output from time to time as fast as additional special machinery can be made.

I expect to organize a French Corporation in the early winter for the manufacture and sale of the new Edison storage battery. This battery is all you say it is and especially adopted for vehicle traction.

Your letter has been filed and you will be kept fully posted. Thanking you for the inquiry, I am,
Sincerely yours,

June 18, 1902.

G. H. Pollison, Esq.,

Elm Grove,

Windermere, England.

Dear Sir:

As the foreign end of the storage battery business is in my hands, Mr. Edison has turned over to me your favor of the 30th of May. The American company will begin furnishing a limited number of batteries in about two months and it is probable that an English corporation will be organized for the manufacture and sale of the new Edison storage battery the first of next year. It would take about six months to put up a new plant with the special machinery and so it will be atleast something over a year before this battery can be offered for sale in England.

Yours very truly,

6/20/HRD/L /02.

Sir David Dale, Bart.,
West Lodge, Co. Durham,
England.

My dear Sir David:--

I have always talked very frankly with Mr. Ainsworth about Mr. Edison's interests and my own, in connection with the Dunderland enterprise, and I have to-day written Mr. Ainsworth that I am writing you this letter.

In order that you may fully understand the situation, I must go back to the time when Mr. Lawrence employed Mr. Simpkin.

At my urgent request by cable, Mr. Edison allowed Mr. Simpkin to go over to London and meet the gentlemen who were considering investing in the Dunderland enterprise. He could not well afford to spare him at that particular time, but sacrificed his personal interest to accommodate me.

Before leaving London, after having practically finished his work, he was employed by Mr. Lawrence at a salary largely in excess of what he was receiving here and more than he would have been willing to come for in the beginning of the work, at least. The agreement was made with him, unknown to me, and you will remember that the first time I heard of it, was at a meeting at the Linotype Company, where you, Mr. Ainsworth, Mr. Wallace and myself were present. You may remember how indignant I was when Mr. Lawrence

#2.

made the statement that he had employed Mr. Simpkin for \$2,000.
per year.

When Mr. Simpkin returned to this side, Mr. Edison was
down in Florida at his Winter home, where he generally goes for
four or five weeks and when he came back here, he found Simpkin in
full charge, occupying a portion of the Laboratory.

Mr. Edison would have been willing to have turned over Mr.
Simpkin had he been approached in a proper business like way, but
he was not consulted and the employing of one of his best men
without referring in any way to him, was, to say the least, most
unbusinesslike.

Mr. Edison has never received a letter requesting that
he design the Dunderland plant, nor has he been informed that
Simpkin is to be the Constructing Engineer, working under his
direction. While there are three corporations, the Syndicate,
the Construction Company and the Dunderland Company associated in
the Dunderland undertaking, so far as the Dunderland proposition is
concerned, the Board of the Dunderland Company must be supreme;
therefore, it does not matter whether Mr. Simpkin was hired by the
Syndicate or by the Construction Company, a letter must be sent to
Mr. Edison, advising him that he is to design the Dunderland plant,
and that Mr. Simpkin is to be the Constructing Engineer.

#3.

Mr. Simpkin is a first class man and the best possible man that could be employed for this purpose, but in London, he only came in contact with the Chairman of the Syndicate, and came home full of instructions from him. All the information Mr. Edison gets re Dunderland, he receives from Mr. Lawrence and from this end, it would seem as though he was in supreme command; and we all know how unfitted he is to direct a huge enterprise of this character.

Much work has already been done toward the designing of this plant and Mr. Edison has been very busy in this connection, so that no time has really been lost; but now, it is most important that Mr. Edison receive the letters above referred to.

Mr. Simpkin expects to leave here on the 5th of July, with the general plans complete, the details which will be worked out in London by Simpkin and his staff, and a blue-print of each drawing must be sent to Mr. Edison for his approval.

Mr. Edison has the utmost confidence in Mr. Ainsworth and his associates, and only desires the plant shall be a great success. It is for this reason that he must approve all plans and machinery to be used at the Dunderland plant.

You will remember, in our conference regarding the amount to be paid to Dr. Lehmann and Mr. Roberts, we all saw the effect

#4.

of paying Mr. Simpkin the salary we do.

I write you thus frankly and personally, because you are a member of the Syndicate, and in addition, hold shares in the Construction Company, and are Chairman of the Dunderland Company. Will you please have the above letters written as early as you conveniently can, and greatly oblige,

Very truly yours,

June 24, 1902.

Vernon H. Brown, Esq.,

29 Broadway,

New York.

Dear Sir:

As the foreign end of the storage battery business is in my hands, your favor of the 18th inst. enclosing letter from Mr. D. Cunningham has been referred to me by Mr. Edison, and in reply I beg that Mr. Cunningham's letter has been acknowledged and shall have attention when the time comes to form an English company.

Yours truly,

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June 24, 1902.

Messrs. Quellmaltz & Co.,
Sachsische Bankgesellschaft,
Prager Strasse 20, I.,
Dresden, Germany.

Dear Sirs:

Replying to your favor of the 5th inst. addressed to Mr. Edison, which has been referred to me, beg to state that a foreign corporation will probably be organized during the coming year in Germany for the manufacture and sale of the Edison Storage Battery; just how this will be done I am not in a position to say at present.

Your letter has been placed on file.

Yours truly,



June 24, 1902.

D. C. M. Hume, Esq.,
Seafarther, Bournemouth,
Hampshire, England.

Dear Sir:

As the foreign end of the storage battery business is in my hands, Mr. Edison has turned over to me your favor of recent date, and in reply beg to say that it will be atleast a year or longer before a factory is established in England for the manufacture of the Edison Storage Battery. These batteries can be used to furnish power for any vehicle.

Yours truly,



750

Oct. 8, 1902.

Messrs. Frazer & Co.,
65 Wall St.,
New York.

Dear Sirs:

As the foreign end of the storage battery business has been turned over to me your letter of the 7th inst. addressed to Mr. Edison has been turned over to me for attention and in reply I beg to state that at present we are not yet ready to exploit the battery in foreign countries. We expect to organize a corporation in Japan as well as in other foreign countries during the coming year for the sale and manufacture of the Edison battery but just how this will be done I am not in a position to say at present.

Your letter has been placed on file.

Yours truly,

H. E. Dick
J.

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11/17/02/BRD/L

S. Rosenberg, Esq.,
 35 Unter den Eichen Strasse,
 Berlin, Germany.

My dear Hermann:-

I cabled you on Saturday, as follows:

"Give long charge at thirty amperes for twenty-four hours to bring it back from heavy discharges you gave it, then discharge down to three quarters Volt at thirty ampere rate. Thereafter charge and discharge at thirty ampere rate; this gives best results."

The cell has been charged and discharged at too high a rate. Your electrician probably was aware of this before you received my cable. If he has any doubts regarding the charging rate, have him charge and discharge the cell at 50 amperes.

I enclose a curve made from one of the cells you have before you and it, and you will notice the charging and discharge curve is about the same. You will also note that the scale is not in squares the same as yours, which at a glance looks to be better than it really is.

I arrived on Thursday afternoon, after a very tempestuous crossing but in good health and I did not miss a meal, although I never, in all my experience, have seen the Dining Saloon with less people in it. Only the old veterans took their places three times a day.

S. B. #2.

Of course, to discharge at 50 ampere rate, would require more plates than in the cell you have.

Everything generally is much better than when you were here. The efficiency of the battery keeps creeping up and we have now begun to assemble cells at the factory, and next month will equip one wagon each for all the leading Dry Goods concerns in New York City for their delivery wagons.

Mr. Mallory says that all the machines, etc. ordered for Berlin, will be completed about February first. I am going this afternoon with Mr. Edison down to the Chemical Works. I will write you the latter part of this week after I return from Stewartville. I shall come back here shortly after Thanksgiving and put in my time steadily until Christmas.

With kindest wishes to all, I am,

Sincerely yours,

A. E. Dick

(Enclosure)

11/13/02/AM/L

T. P. Hardy, Esq.,

Plus Newydd,

Tremant, N. Wales.

Dear Sir:-

Yours of October 28th, has been held pending my return from Germany.

I fear I cannot promise you an Accumulator such as you desire for lighting. However, I wish to say that the accumulator is all right and is better than the claims put forward for it by Mr. Edison.

In this Country, we are just beginning to equip automobiles, having completed all the tests Mr. Edison deemed necessary. The present factory is only a small one and was equipped for the purpose of getting the business well in hand before beginning work on a large plant. It will have a capacity only of about 300 cells per day, and as orders could be had for many times this number, you will see how improbable it is to promise anything for export.

I expect to be in England, in perhaps sixty days, with a few batteries. Fortunately, they speak for themselves and their performance will convince the most skeptical unbeliever.

Thanking you for your inquiries, I am,

Sincerely yours,

H. P. Hardy

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11/21/02/HND/L

London Ore Milling Syndicate, Ltd.,
Atherley House, Norfolk St., Strand,
London, England.

Dear Sir:--

I enclose a statement handed me by Mr. Edson, showing the expenses of briquettes up to the present time. There will be very little more expenses connected with this, but Mr. Edson does not want to exceed the amount you have already allowed. It is most important that an additional allowance should be made him and I am writing you because it is not quite clear in my mind whether it is the Syndicate or the Dunderland Company who should be addressed, although I understand the Dunderland Company is bearing the cost.

Mr. Kalliday, Secretary of the Consett Iron Works has been here and looked over the briquetting ovens, also the bank of magnets and bins. He also spent a few days at Stewartville.

Mr. Edson, since I left England, has made a most important discovery regarding the manufacture of Portland Cement. It is more important in the Cement world than the Bessemer process was in the Steel world.

R.O.H.S. P.

He is able to make Cement absolutely uniform, always the same and of such strength as has been heretofore unknown. He is taking out Process Patents and I have had a complete understanding with him regarding what he thinks is fair for him in turning over these patents to the Syndicate; and I am sure that when I come over and state these conditions, you will see they are most fair to the Syndicate and fair to him.

It is not necessary now to find Cement rock; what you want to look for is almost any kind of shale or slate. You will always find a limestone (Carbonate of lime) adjoining. This deposit, of which there will be no difficulty in finding, must be first well located; that is, it must be adjacent to water, for as Mr. Edison says, there is no incentive for him to save a penny a ton here and a penny a ton there, if all these savings are to be swallowed up in freight, royalties, etc. There is such a huge field of this slate deposit and limestone that you can practically make your own selection, but bear in mind that the most important of all is location. It must be where a Dock can be built for loading on ships, without any railroad haul, and it must be freehold property. You will appreciate the importance of this when I tell you that the plants such as the one at Stewartville will

P.O. No. 7.

make all the Portland Cement there is made to-day in England and
dock, plant and all the appurtenances necessary to put these two
plants in a going concern, together with the ^{purchase} question of the
deposit. It would cost less than one million sterling.

When you get these samples from the different deposits,
conserve with #1 and number them consecutively, sending Mr. Edison
about a pound of each sample and he will have them assayed at the
Cement Laboratory at Stewartsville, charging you actual cost for
the time. This will save a large sum of money for assaying
and it will also give Mr. Edison a chance to determine the character
of the deposit. A complete record of these samples must be
kept, as you know. With our machinery we can handle slate
and no one else can, and under the process of this new discovery,
we want slate and limestone only.

Also look out for dock and port charges in the different
localities, for we are going to start in and do the Cement business
of the world and we do not want to be handicapped on the outgo by
any of these petty charges that eat into our profits. We have a
great margin but we want to keep that margin ourselves instead of
paying it out unnecessarily.

We want to go at this just as soon as we possibly can
and above all things, do not mention that we want to make cement

E.O.M.S. #1.

out of slate or we will bid up the Slate properties against ourselves. Just go ahead quietly; find your properties and when Mr. Edison is satisfied with the deposit, secure an option on it for outright sale and then we will ship over 500 tons of the slate, make cement of it and ship it back, and then nobody can be deceived in the matter.

It is amazing how the Cement business has reached the proportions it has with such little knowledge in the trade as to how cement should be made. I believe that the Syndicats can and will control the Cement market of Europe and the profit in its manufacture will be something gigantic.

These statements I make after cement has been made at Stewartville. On account of this new discovery of Mr. Edison's, certain conveyors, etc. have had to be changed, but the Mill starts up in a very few days.

Very truly yours,

(Enclosure)

11/21/02/RED/L

The Mulliner-Wigley Company, Limited,
Coventry,
England.

Dear Sirs:--

Yours of October 30th, has been held pending my arrival from the other side.

It is our intention to establish a factory in England at an early date, for the manufacture and sale of the new Storage Battery, and until that has been done, it will be impossible to offer any batteries for export. Commencing about the middle of next month, a limited number of batteries will be delivered and the capacity increased until the fullest possible output is attained, as the endurance test conducted by Mr. Edison for the past four months, has been most satisfactory.

The batteries are sold for Fifty dollars per horse power hour, which is the prevailing price of the lead battery on this side.

There is no up-keep, as there is no depreciation in the battery and nothing ever has to be added excepting water and a battery should be in as good condition and as efficient at the end of ten years, as it is after three months use.

I have filed your letter for reference.

Trusting this gives you the information desired, I am,

Very truly yours,

W. Mulliner

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11/21/02/HED/I.

George Ashworth, Esq.,

Consett Hall,

Consett, C.D., ENGLAND.

My dear Ashworth:--

Mr. Edison has handed me your letter of October 30th, and asked me to say that gas as a fuel will not be suitable for the burning of the briquettes. He has achieved such splendid results at the Cement Works with powdered coal as fuel, and has been able to so control the heat both in the Cement Roaster and in the briquette ovens that he is of the opinion that it is the fuel to be used. Not much has been done or can be done until he has received the Dunderland ore.

The bank of magnets 64" high is very nearly ready to be tested. In his briquetting experiment he is using, say, one briquette of Dunderland ore and 50 briquettes of Edison ore, as he is so short of the Dunderland ore.

I have not yet handed him your photograph but I told him I had it. It is in my trunk which I have not yet unpacked as I have been expecting to leave for home every day.

Mr. Holliday has been to the Laboratory and up to the Cement Works, and after going over the Cement Works, has given us his seal of approval. He has asked Mr. Edison for a photograph, and I will get him a small one. When he arrived at the

G. A. #2.

Laboratory on Wednesday, I was with Mr. Edison over to the Battery Works, and he had spoken to Mr. Mallory, asking if he could get a phonograph. Mr. Mallory asked me to see if I could get Mr. Edison to give him one. So far, I have not made the request, as Mr. Edison has more than 30,000 phonographs behind orders. Mr. Edison has put you on a list with instructions to have all desirable new records forwarded to you.

I expect to leave sometime in January but may take the Southern route and leave my family in Italy before coming to London. There are a great many matters I want to talk over with you when I see you, regarding Mr. Holliday's visit here.

The Shipping Clerk at the Laboratory informs me that you must have received those large photographs of Mr. Edison by this time, as he has received word from the Express Company that they could not go astray, as they were in such a large box and the workings were correct. Upon receipt of this, if they have not yet turned up, I wish you would cable as follows: "Dick--Chicago; No;" and I will understand.

With best wishes, I am,

Sincerely yours,

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12/1/02/HED/L

Mr. S. H. Pollen, Secretary,
Fitzalan House, Arundel St., Strand,
London, W.C., England.

My dear Sir:--

Mr. Edison has handed me yours of the 19th of November.

We were under the impression that this was a briquetting experiment and that the Board were convinced the Hematite could be separated and the phosphorus practically eliminated.

Mr. Edison has been using any Dunderland Hematite that he can find here and does not know whether it is 50% or 60% or whether it is high or low in phosphorus. What he is trying to do, is to produce a briquette from the Hematite only. As soon as the Dunderland ore is received, the bank of magnets will be ready for it and then we will be able to send you briquettes for analysis, but not until then.

We have no way here at present of separating but shall have the high bank of magnets ready to test this week; unfortunately we cannot go any further until we receive the ore.

Very truly yours,

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12/11/02/HRD/L

H. F. Parshall, Esq.,
Salisbury House, London Wall,
London, E. C., England.

Dear Mr. Parshall:--

I have yours of the 25th of November and note what you say.

The great difficulty I am going to have, is, not to find money for the establishment of a manufacturing plant, but to use my very best judgment in selecting the persons who are to form this Company, outside of Mr. Edison and myself.

I have been here for some few weeks and have gone into this Battery business very thoroughly. Mr. Edison expects to commence delivering a limited amount of batteries next month and this output will be increased gradually up to full capacity of this first small factory.

The battery is all right. I have one weighing 345 pounds in my automobile, which theoretically, ought to take my runabout about one hundred miles over these Country roads. Practically, I never have gone over eighty-eight miles with it, but there seemed to be plenty of ginger left in it after travelling this distance.

I believe I can arrange to send you one cell shortly after January first and I would like to have you see for yourself what there is in it. It has always been my intention to invite

H.M.P. #2.

you to become the Consulting Engineer of the proposed new Company, and for this reason, I would like to have you satisfy yourself so far as it is possible to do, just what this battery is.

I am expecting to leave for Italy about February first, where I shall locate my family and come up to London on other business, as I do not expect to organize an English Company for several months yet. I want to be in a position so I can show just what this battery is. The cost of manufacture and all the thousand and one little details, which will take at least two months yet to procure.

With best wishes, I am,

Sincerely yours,

J.E. Quinn

P.S. Please do not mention that you expect one of these cells.

144 ✓
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12/11/02/HED/L
W. N. Stewart, Esq.,

c/o A. B. Giffins & Co.,
68 Victoria Street, Westminster,
London, S.W., England.

Dear Sir --

I have yours of the 20th of November and note what you say regarding your people in Sweden.

I asked Mr. Edison yesterday about your question regarding the maximum safe discharge rate of any given size cell and this is what he wrote:

"With our best auto of 36 cells, normal discharge rate 25 to 30 amperes, average 1.2 volts per cell, maximum rate, the vehicle takes on climbing the Eagle Rock hill, 105 amperes. The new cells will have a charging capacity of not less than 200 watts per cell. 18 pounds ~~will~~ say, one year of daily service."

I do not know that this quite answers your question, but it is safe to say that the cell can be discharged at eight to ten times its normal rate without injury.

I expect to leave here about February first for Italy and will go from there to London. With best wishes for your success, I am,

Truly yours,

H. E. D.

290 ✓
12/11/02/HRD/L

Mr. S. H. Pollen, Secretary,
Fitzalan House, Arundel St., Strand,
London, W.C., England.

Dear Sir:--

I have yours of the 29th of November. It was impossible for me to get a reply to you in time for your meeting of Wednesday next.

I have gone into the matter of future cost for briquetting experiments, and find it will cost about 250. When this has been completed and a satisfactory briquette produced, which can be done, Mr. Edison will make his full report as to cost, etc. He does not seek these experiments here, in fact, they take up a great deal of his time, but he does this work because he is greatly interested in the success of the Dunderland Company. He says, therefore, when he has produced these briquettes satisfactory in every way, that his work will be finished. However, he says that before the Dunderland Company go to the expense of erecting the necessary number of ovens at Dunderland, that one oven should be erected such as they would use at Dunderland, ^{and thoroughly tested} and it should be built either in England or here, so that there may be no chance taken at Dunderland. One reason that the Cement Mill has worked so well throughout, is that every unit of that Mill was made and tested here at the

S.H.P. #2.

Laboratory before being constructed at Stewartville.

I am glad to note the shipment of 80 tons of the Dunderland ore on the Steamship Toronto, and we will be ready for it as soon as received.

Sincerely yours,

H. E. Lick

2+8
295
12/11/02/HED/L

S. Bergmann, Esq.,
23 Cudenarder Strasse,
Berlin, Germany.

My dear Bergmann:--

I have been waiting to reply to yours of the 14th ultimo for your letter that you cabled was on the way.

I have your cable, saying that you charge 200 amperes and discharge 120; that is all right. Everything is sacrificed in this battery to durability, and we have it from Altmann & Company, of New York, that the expenses of a two ton delivery wagon are \$5.60 per day, and the expense of the current is 23 cents per day, so you see the current cuts no figure whatever.

Economy has been sacrificed for durability, which is the essential feature and in fact, the only feature for a commercial storage battery.

When I receive your letter, I shall cable you whether to turn those batteries over to your Professor at Munich or not. These cells will show the invention as well as any.

I have ordered for you a Studebaker automobile and it will probably be ready to be shipped in February. It is only a runabout but it is very durable and equipped with the battery should be able to make a run of about one hundred miles.

Mr. Mallory advises me that the special tools are being

S. B. #2.

hurried along and he will be able to ship about the first of February.

Everything is all right and you need not have any fears regarding the Storage Battery being a huge success.

Sincerely yours,

H. E. Dick

The General Electric Company have just analyzed their automobile motors regarding their efficiency & they find their efficiency is about 70% while all others only show 50%. The G.E. Co. claim their motor shows 82% & they will send me one in about three weeks. You should give this some thought or as not to let anyone fool you. Will send you a few cells just as soon as I can get them.

H. E. D.

244
262

12/16/02/HED/L

Captain F. H. Pollen, Manager,
Edison Ore Milling Syndicate, Limited,
London, W. C., England.

Dear Sir:--

Replying to yours of the 1st inst., I have shown your letter to Mr. Edison, also ~~sent~~ the copy of my letter of the 11th of November to him this morning, and he said that you would probably find Carbonate of lime close to shale or slate deposit. Limestone containing more than 3% of magnesia, cannot be used.

Whenever you find Carbonate of Lime of a suitable nature, you will undoubtedly find it in sufficient quantity. Before securing options, samples should be sent to Mr. Edison, for analysis.

Yes, it does mean that in your search for deposits, you are not restricted to the location of "Cement Rock", as you have formerly been instructed to secure.

Mr. Edison just returned from Stewartsville last night, smiling and happy and says he has washed his hands of the Cement business. The Mill is running satisfactorily and I have just cabled you to this effect. Remember, that at present, there are only two Burners constructed ~~at present~~, and to bring the Mill up to its full capacity, six or seven more will have to be built; the reason for this being, that as these burners cost about forty

F.H.P. #2.

thousand dollars each, Mr. Edison did not feel justified in erecting the whole number until he was satisfied with the results he obtained from the first ones. After the plant has been running, say a month, a confidential report will be made.

The Rotary Kiln, Mr. Edison tells me this morning, can be most economically run on an output of 32 barrels per hour, that is to say, that this seems to be about the maximum output with the lowest fuel economy. A greater output seems to increase the fuel consumption out of proportion, and Mr. Edison believes that, with an output of 32 barrels, the saving will more than justify the erection of an additional burner, as he saves eight pounds of coal on every barrel at a 32 barrel capacity, as compared to a 40 or even a greater capacity.

We suggest at present, that nothing be said concerning the success of the Cement plant outside of a few trusted shareholders.

Very truly yours,

283 ✓

12/16/02/HRD/L

S. Bergmann, Esq.,

23 Oudenarder Strasse,

Berlin, Germany.

My dear Bergmann:--

Yours of December 4th, with charge and discharge curve of the progress cell received this morning.

You seem to have fallen into the error of almost everyone outside of the intimate associates with Mr. Edison in the battery, which is not unreasonable possibly for you, considering the short time you have had to spend in acquainting yourself with the merits of this invention.

In the first place, my dear Bergmann, this is a new invention and in order that it be a commercial invention, everything has been sacrificed, as I wrote you several days ago, for reliability and permanency.

The cost of the current is nothing as compared with other costs, for example, the cost of the current for operating the tube in London, is less than 6% of all the other costs, so that any little saving in the matter of current to them, would mean practically no saving at all.

The cost of operating an automobile delivery wagon in New York, is between Five and Six dollars per day, while from their books, the Altmann people showed us that the cost for the current

S.B. #2.

was only 23 cents per day. What is wanted, is a commercial Storage Battery and this Mr. Edison has, and it is a new invention, and the cells you have will show that it is a new invention as well as any that we can send you. Of course, the cells will improve and are improving, as would be natural in any business, but it is the same invention at all times.

The cells you took over were the best Mr. Edison had at that time. Many improvements have been made since mechanically, and there are some cells coming through now that will give better results than those you have. We do not know here how much time we have before the Patent Office. Please enlighten us on this point. We should have some of the new cells ready in a couple of weeks.

I am going to Chicago on Saturday but shall return about January first. Mr. Edison has seen this letter.

Very sincerely yours,

H. C. Dick

295 ✓
316

12/18/02/HED/L

S. Bergmann, Esq.,
23 Oudenarder Strasse,
Berlin, Germany.

My dear Bergmann:--

I enclose you a blue-print which is a rough sketch of the automobile I have ordered for you. This has been designed for me and I have ordered a duplicate to be shipped to you.

Shipment will be made sometime in February and will be a good serviceable runabout for you. It will contain 38 cells and should have a capacity of about 100 miles. It is well built and will stand almost any kind of hard service.

The cost, exclusive of the battery, will be in the neighborhood of \$700. but this price you must not quote, as we are getting these outfits very close to cost price. I understand the regular price will be in the neighborhood of \$1,000.

Trusting this will be satisfactory, I am,

Sincerely yours,

1/7/03/HRD/L

Lord Avebury,
8 St. James Square,
London, W.C., England.

My dear Lord Avebury:-

I am sending you a large photograph of Mr. Edison. He says he does not know you as "Lord Avebury", for from the time he was a young man, he has you fixed in his mind as "Lubbock", so he has signed the photograph - "To my friend Lubbock".

If I remember, you were to forward at your convenience, your photograph to Mr. Edison and myself and this is to remind you that up to this time, they have not come to hand.

With kindest wishes from Mr. Edison and myself, I am,

Sincerely yours,

H. E. Dail

297 ✓

1/7/03/HED/L

Mr. Fred E. Bright,
1614 Spring-Garden St.,
Philadelphia, Pa.

My dear Bright:--

I have just returned from Chicago and shall be here about three weeks. Mr. Watson expects to be here, with the possible exception of a day or two at Stewartville each week, all the time. I want you to come over at your convenience, and you had better advise me what day you expect to come, so that if by any possible chance he would be going out of town, I can wire you and arrange a day when he will be sure to be here.

If you do not hear from me in answer to your letter, you may rest assured that he will be here. I have explained to him how urgent it is for you to have a battery at the very earliest moment, and he agreed that you have the first battery that goes out, which will be very soon, as he understands that your whole automobile business is held up pending the delivery of this battery.

With best wishes to your good wife and yourself, I am,

Sincerely yours,

H. E. Dick

12/8/57
322 ✓
1/8/58/HBN/L

William Simpkin, Esq.,

Standard Construction Corporation, Ltd.,

Mission House, Arundel St.,

London, W.C., England.

Dear Sir,

I was notified of your return of the 22nd of December and also that you were still in London awaiting my return.

I had hoped I would be here when you arrived, but I am sailing on the 7th of February and will only be here one day just before I sail. Mr. Tatham leaves for Florida about February 20th, and he told me to say that in case you were delayed for any reason, you might come down there to his house and see him.

I hope all you say and I am sure you are doing what you think is best for all concerned.

Sincerely yours,

H. B. Smith

273

1/8/05/HRD/L

H. F. Parshall, Esq.,
 Salisbury House,
 London, Wall,
 London, E.C., England.

Dear Mr. Parshall:--

I have yours on my return from Chicago, of the 22nd of December, and note what you say.

I have a most surprising and favorable report to make on the battery at this time and that is, Mr. Edison has recently found out how, by assembling and manufacturing the battery on a little different line from his original standard cell, that it is possible now to triple the discharge and charging rate without sacrificing anything. As soon as one of these new cells is complete, I am going to send ^{you} ~~it~~ to you to play with.

I set up well through ^{last} ~~the~~ night with Mr. Edison ~~last~~ night and we were estimating the great economies which could be made with station batteries such as he is about to construct. "He is designing and will shortly make one station battery cell. It will have a capacity of about 40 horse power hours and will be sold to the trade for about \$25. per H.P. hour. Mr. Edison says there is no reason why the station battery cell (which can be made much heavier than an automobile cell) should not last 100 years or

H. F. P. #2.

practically indefinitely, as the alkaline electrolyte, of course, preserves the steel.

We estimated that on a New York lot 25 x 100, say, in the residential district, 50,000 H.P. hours could be stored without any difficulty whatever. I believe that we will see your branch of the business given the greatest impetus it has ever received by the introduction of this battery.

I could send you a cell to-day but it is not constructed with the new improvements ^{for repairs} ~~of~~ ^{for} charging and discharging, therefore, I prefer to wait for a few weeks until we can get a few dies made necessary to make the new cell.

Sincerely yours,

H. F. P.
*P.D. This battery can now be charged
and discharged in one hour.*

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1/6/03/HBN/L

332

Captain F. H. Pollen,
Pitzelton House, Arundel St.,
London, W.C., England.

My dear President:-

I have yours of the 19th inst. and note carefully all you say.

I am of the opinion that Lehmann is getting Paresis, and it's a great question whether he is going to be of any advantage to the Syndicate, unless he braces up and get his wits about him.

The Cement Mill is running continuously but if there were eight Roasters running, they would be in trouble, for this reason, and it is a most remarkable condition that they are confronted with at the present time. It is only because the Crushing plant's capacity so far exceeds the Roaster capacity that they have been able to run for the last two weeks. This is not caused by any fault in the construction of the plant but by this fact, that in the Cement Rock Quarry, the rain, of which there has been considerable in the past few weeks, has permeated all through the layers and frozen; then ~~the~~ ^{every} day or two it would rain and freeze again. This has caused the layers of the cement rock which are extremely thin, to foliate like the leaves of a book, and the result has been that so much ice and soft clay (of which there are several seams a few

F.H.P. #2 .

fact apart) have gone in with this cement rock that it clogged badly and the capacity of the dryer did not seem to be great enough to overcome this difficulty.

These poor results / mention happened when the Crushing plant was run to its full capacity; by running it one half capacity it caused very little trouble; yet, there is this feature which must be remedied. An easy way out of this trouble and what Mr. Edson always intended to do was to put a roof over that portion of the Cement Rock ^{in a tank} ~~quarry~~ that he was using, and every time a blast was made, the roof would be run back to a line of safety and then brought forward again after the blast. If the weather would stay cold, so the rock would be frozen solid, there would be no difficulty. It is this alternate freezing and thawing, which has made the trouble, which, of course, you understand is only temporary and as soon as the roof is constructed, there will be no further trouble.

The Mill is running right along and the Roaster has never been shut down one minute since it was started.

I give you an account of all these little troubles, so that you may fully understand the situation just as it is. When mining the limestone, there is no trouble of this kind, because it is solid rock in which the rain and clay cannot permeate.

Sincerely yours,

H.C. Dicks

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1/8/03/RED/L

S. Bergmann, Esq.,

23 Oudenarder Straas,

Berlin, Germany.

My dear Bergmann:--

I have nothing to report but the most favorable news. Mr. Edison has recently discovered how to triple the discharging and charging rate of the battery without sacrificing anything. The curve he will be able to get is far better than a lead battery can ever prove in practice, and the economy can be made even greater in station batteries than lead.

Think, Bergmann, what it means to discharge or charge an automobile for station batteries in one hour. It means that safety fuses will have to be applied on every motor using an Edison Battery, and it means that you will go up a hill ^{about} at the same rate of speed that you practically will on a level. As soon as it is possible to make a cell, the mechanical construction of which has been changed a trifle to meet these new requirements, I am going to send you one. The experimenting will all be over in one week and it is then up to the Factory to turn out batteries.

The new station cell, we expect will sell for about \$25. per horse power hour and each cell will have a capacity ^{about} of 40 H.P. hours. This is going to put new life into the electrical business and you will see within the next few years an expansion in

S. B. #2.

this line which will surprise even an old Manufacturer like your-
self.

I have yours of December 20th and we are anxiously await-
ing the Seubels translation of Professor Doctor Foerster report.
We have found a reference which knocks out the Younger patent com-
pletely, but please keep this to yourself, as I want to keep this up
my sleeve for future use.

I have reports from London showing that everything is
working most satisfactorily for you and you have already had allotted
to you the first contract.

I am sailing with my family for Paris on the "Blutcher",
on February 7th. I shall leave them there for several weeks, while
I go to London, and from London I will come to Berlin for a day or
two; then back to Paris and down to the South of France and Italy.

We are all well at the present time and with best wishes,

I am,

Sincerely yours,

H. B. Park

254 ✓

1/8/03/HRD/L

George Ainsworth, Esq.,

Consett Hall,

Consett, C.O. Durham,

England.

My dear Ainsworth:--

I am glad to hear that you have at last received the photographs and I have just handed Mr. Edison yours. He asked me to thank you for it.

I am glad to hear that Bergmann secured the order upon price and quality. No one can make better goods than he and many turn out work which is much inferior.

When Simpkin arrives, Mr. Edison is going into the briquetting problem with him thoroughly. He asked me to say, in his judgment, there is no need of any alarm in this direction.

I am sailing on February 7th, with my family, and we shall first go to Paris, where I shall leave them until I go to London and Berlin. Afterwards, we expect to spend considerable time in Italy.

Sincerely yours,

316

1/13/05/BER/L

My dear Bergmann:--

I have your two favors of December 29th. Yesterday, I cabled you as follows:

"Latest results Nickel battery shows much higher discharge rate than lead, with far greater economy and no depreciation; weight 87# Kilowatt hour;- Inform German Traction Companies. Hailing curves. (Signed) Edison."

The reason for our sending this was that there were so many cable dispatches in all the papers Sunday from Berlin, showing the lead batteries were a failure and that the Traction Companies were about to put in the underground trolley which would cost a very large sum of money. We thought under these conditions, you should be informed as to the latest results here. Mr. Edison did not believe so at first but came around to my way of thinking and together we got up the cable, and I prevailed upon him to sign it.

The fact is, Bergmann, that this battery is simply "out of sight." The curves are about the same whether the battery is charged at normal or several times normal or discharged in an hour, or discharged in six hours. It don't seem to make very much difference. These curves spoken of in cable, I doubt if we can complete to send you before one week.

To put it in a simple way, when a lead battery is new, to

S. B. #2.

get the same output, it would require a battery four times as heavy as the Edison battery. I am sure these curves will be a revelation to you and this great improvement has been brought about by a simple change in the mechanical construction only.

With best wishes, I am,

Sincerely yours,

S. Bergmann, Esq.,
Berlin,
Germany.

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1/22/03/HRD/L

330

S. Bergmann, Esq.,

23 Oudenarder Strasse,

Berlin, Germany.

Dear Sir:--

I was over to Glen Ridge yesterday and Mr. Hays showed me a letter which you had written enclosing cut of press you think of buying, and I at once cabled you as follows:

"Do not buy press or anything for battery until you receive my letter; changes made."

I have stopped work on the Briquetting machines as these will not now be needed; without going too much into the detail, as it is hard to do so by letter, I wish to say that Mr. Edison has made the recent great improvements by making the pockets just half as thick and loading the active material dry. This will simplify the manufacturing proposition very much and the results he has obtained are most surprising.

At the Automobile Show, where a battery is on exhibition, it has created the most intense interest. He has written a card and signed it as follows: "An Edison battery weighing 460 lbs. in a Baker Runabout, runs 100 miles at an average speed of 10 miles an hour. On one hours charge, it will run 75 miles, over fairly level New Jersey macadamized roads. Reducing the weight of the battery reduces the distance in about the same proportion. This

S. B. #2.

battery can be completely discharged or overcharged without injury."

Mr. Edison is testing a motor designed by Mr. Churchward, of the General Electric Company who has charge of their small motor work. It is believed that this is the most efficient motor yet produced.

Mr. Churchward has this patented abroad and he said he would come over and see me this week regarding the Foreign rights. If it should prove to be an ideal motor, perhaps a working arrangement might be made whereby you could make the motor. This I will look up thoroughly and talk over with you when I see you the latter part of February.

Sincerely yours,

J. E. Smith

88

1/22/03/HUN/L

Joseph Laurence, Esq.,
 c/o Linotype Company,
 188 Fleet Street,
 London, England.

Dear Sir:--

I received yours of the 25th of December several days ago but I have been working every night with Mr. Edison until midnight and sometimes later, so it seemed to be almost impossible to get time to catch up with my mail.

I cabled the Syndicate yesterday upon receipt of Captain Pollen's letter and also one from Mr. Rudd, and I am to-day writing the Syndicate a very plain letter which, of course, you will see. I write you this part separately, as I do not want to drag Arthur's name into the matter before the other Syndicate members.

I have tried to keep the Syndicate posted as to every movement made here re Cement and when Arthur was here, ~~consequently~~, I told him what Mr. Edison hoped to be able to do and at the same time he understood that we had only two burners built, whereas we shall probably use nine or ten. You can easily see, that with the crushing capacity of five times the burning capacity, you cannot get results, but from what had already been done, it was an indication of what might be done with the full burning capacity at the Mill. I did not tell him that we had the coast down to the

J. L. #2.

price you mention and might get it lower. I said, that taking a careful survey of everything and the splendid way which every part of the plant responded to its work, that we probably could attain these results. It looks to me that Arthur has given these points which I gave him in confidence, as facts, and that you have gone ahead on this supposition, which is a grave error.

Regarding the Dunderland shares which the Directors are to receive, will say, that I do not want you to divide with me. What I want, is to have every Director satisfied, even though I do not receive one share for myself and I feel that Wallace has been in from the beginning, we must be fair with him.

I have this morning yours of the 9th, enclosing clipping from "Financial News". I have showed it to Mr. Edison and he cares nothing about it.

We are all well and I thank you for your kind wishes, which I return.

Sincerely yours,

J. E. Guin

326 ✓
344
S. Bergmann, Esq.,

23 Gudenrader Strasse,

Berlin, Germany.

1/25/03/HKD/L

My dear Bergmann:--

I am much obliged for your favor of the 8th inst. enclosing report from Professor Forrester.

When Dick goes over, he will have a small cell for Professor Forrester to play with, and he will be amazed with the results he is sure to obtain.

Referring to that part of your letter where you say that it has leaked out that you are going to have the manufacture for Germany, I must say that this is a great surprise. It was never intended that you should manufacture the battery in Germany or elsewhere but that you would be one of a number of strong firms who could be asked to join me in this business. The shipping of a few tools to you was for the express purpose of showing the manufacturing side of the business and not for the purpose of making batteries to sell.

Now, Bergmann, this was all well understood between you, myself and Dick. Dick is to do the financial part of the business; I am to furnish the battery; you are to look after the manufacturing and that is the manner in which this proposed business must be conducted. After Professor Forrester has had time to criticize



S. B. #2.

the new call which Dick will give him, I would like to have him
make a new report.

Yours very truly,

314 ✓

1/22/03/HEN/L

F. H. Pollen, Esq., *Managing Director*
Fitzalan House, Arundel St., Strand,
London, W.C.

Dear Sir:--

Referring to yours of the 7th of January, I herewith hand you a memorandum made by Mr. Edison, which will answer your questions satisfactorily.

We will send five barrels of cement to the Consolidated Gold Fields of South Africa, as you suggest, for testing. Before Simpkin comes over, you had better find out just exactly what is wanted with the gold ore from South Africa, which we have received; just how fine they want to crush it and all the particulars, and give same to Simpkin, and when he returns, he will be able to give all the information required.

I cabled you yesterday, upon receipt of two letters from Mr. Rhodes, as follows:

"Why this rush with cement. You have no deposit, no data from mill here, nothing to offer. No satisfactory proven production cost can be given until Roaster plant complete. Exploiting Company now means blasting Syndicate prospective cement profits. Wait for letter."

You are putting the cart before the horse by your proposal to bring out a Cement Company at this time. You will remember,

F.H.P. #2.

that I wrote you sometime ago, stating just how we thought would be a commercial, businesslike way of bringing out a new Company.

First of all, we said you must find a deposit and send to Mr. Edison samples for assay which he will have made at the Cement Laboratory and charge only cost for the work. Then, when a suitable deposit is found, secure an option on same and ship 500 tons or less of the Cement rock to Stewartsville, where it will be made into cement and shipped back, then there can be no controversy as to whether the deposit is suitable or not, for you will have the cement made from it.

I also pointed out that the capacity of the Roasters at the Cement plant are only about one fifth of the capacity of the Crushing plant and that owing to the great expense in building these roasters and also that they were more or less experimental, being on such large lines, that Mr. Edison did not care to invest over ~~three~~ ^{two} thousand dollars (the cost price of the two roasters) until he was satisfied that they were all he hoped for. After these roasters have run several months and if they do not show any defects, the additional roasters will be gradually added, until the Roaster plant is complete. Enough, however, has been proven so far by their work, to give Mr. Edison a good indication of what will be done in lowering the manufacturing price of cement by the full equipment.

F.H.P. #3.

You must remember, that every statement you make regarding the cost production of cement by this process, will be challenged and fiercely challenged, and unless you are in shape to show a going business, producing cement at the cost you state, you will find yourself in a most ridiculous position.

If you and Mr. Rhoads sail on the 21st of February, you will find the Cement plant running and can form your own impressions from it. Mr. Edison will be in Florida and I will be on the other side, but you will be most welcome and Mr. Darling, will take good care of you; but you will not at that time be able to procure such figures as would be useful for a prospectus, for you can understand that if one portion of the plant has a capacity of five times another portion, the net cost of producing cement under these conditions will be abnormal as compared to a complete Mill. You will be able, however, to satisfy yourself, for you seem to be somewhat incredulous that cement can be made at a much less cost than any other process. For our part, we cannot conceive why a Company should be even thought of without a deposit. The more you talk Cement Company, the more you raise the price of favorable properties against yourselves. This should be a very pretty proposition if it is not rushed. Here will be a going Cement business, producing a certain number of barrels at a certain price;

F.R.P. #4.

that will be the condition on this side. On your side, would be an equally good quality of cement rock, advantageously located, a portion of it having been shipped over here, made into cement and returned to you subject to anyone's inspection and test and there you would have the data from this side and the cost price. From your side, the conditions being similar, it would be only reasonable to presume that cement could be produced equally as cheap as on this side. If this is not a clearly commercial proposition, I have never had one brought to my attention; but, on the other hand, if what you are proposing to do now; rush off, form a Company without a deposit; without data, without anything, and rush pell mell into the business, you will find yourselves simply pulled to pieces; and our prediction is, the flotation of a Company at this time would be a dead failure, and in fact, we are against it. The Syndicate has a great future in cement and there is no good reason why the business should be jeopardized in its incipency by undue haste.

I enclose a letter for Mr. Sampkin.

I note another opinion by Mr. Norberg-Schultz, of Norway, regarding the Wetherell patents. When I was there last, I stated that before any more patent cases were submitted to anyone, the patents in question should be first submitted to Mr. Edison so that

P.R.P. #5.

he could give you all the necessary data. No one is able to judge a patent by itself, it must be taken into consideration and conjunction with all other patents in all other countries, and as Mr. Edison in the Pioneer and knows more about this particular business than anyone, he should be consulted, before such action is taken and you are simply inviting trouble by getting expert opinions on individual patents. The Wetherell patent was taken to Germany and sold for a large amount of money. The Company who sold it, afterwards gave up its charter and went out of business, solely for the reason they were afraid they would be called upon to return this money and this is well known. Mr. Edison has numerous patents on this art, antedating the Wetherell patents and it is unjust to him for you with your limited knowledge of this subject, to be seeking expert opinions without first consulting him.

Wm. H. Dick
H. E. Dick

(CONFIDENTIAL.)

1/23/03/HKD/L

Wm. Rhoads, Esq.,

Flore Fields,

Weedon, England.

My dear Rhoads,

I have your two favors, one of January 6th, the other not dated.

I have written a full and comprehensive letter to the Syndicate re cement, as we see it on this side. I should arrive in Paris on the 15th or 16th, and after taking two or three days to get settled with my family, I shall come to London and be there before you sail on the 21st.

You will notice in my letter to the Syndicate, and you have undoubtedly seen the cable I sent, which was approved by Mr. Edison, it is a problem to us here to see how anything can be done toward the formation of a Cement Company at this time. However, all of this is explained in my letter to the Syndicate, so that I need not burden you with it here.

So far as your being Chairman of the Company when it is formed, I will say that it meets with our unqualified approval, and this feeling also extends to Mr. Hawksley, who will hereafter, conduct any legal business that I shall have in England. I have ordered five barrels of cement to be sent to South Africa, as requested.

W.R. #2.

So far as the detail of the new Company is concerned, I am willing to leave it to Hawkeley largely, being satisfied that he would protect the interests of the Syndicate, stipulating, of course, that Mr. Edison should have what I consider, his rights.

The profit will, in all probability, be considerably more than you state. Cement has been selling f.o.b. at the Mills in this Country until the cold weather set in, at \$2.25 per barrel or 400 pounds. At present, (the weather prohibiting its use) the price is from \$1.75 to \$1.90. I have not the figures at hand at present, giving the total consumption but it is in all probability, close to twenty ~~more~~ barrels and the demand is increasing beyond the capacity of the Works to supply.

I enclose a clipping from last week's Cement paper which will give you some idea of the imports from different countries, which is given in pounds. Wages abroad, I believe would be somewhat less and fuel would be about the same. From here, I cannot say how soon the patents in South Africa must be worked and it would not be such a tremendous expense to erect a small Mill in South Africa, provided the material was there, to protect the patents. This Mill would yield a good profit and could be enlarged from time to time.

I see that you have been inoculated with the Edison

W.R. #3.

improvement mania. Nothing has been changed at the Mill and this improvement you speak of was brought about by Mr. Edison's efficient machinery and plant which enables him to make the same quality of cement all the time without any risk of poor cement, as is the case with every other process. This great efficiency of the plant permitted Mr. Edison to take out a process patent to protect himself as well as our associates and it was for the good of the Syndicate that I did not mention this in detail. We have learned that our confidential communications to the Syndicate are in turn repeated to confidential friends until the subject becomes common knowledge, and we wanted to protect ourselves and you at the same time.

I should like very much to meet you with Mr. Hawksley on my arrival. I am sure that any clear headed business man can see the great danger to us by prematurely exploiting as fine a business as the Cement business will be. Mr. Edison has written Mr. Pollen just what he is to look for in the way of Cement material and he is not limited to one class of material.

I wish you would get the letter that I have written to the Syndicate and show it to Mr. Hawksley and Mr. Rudd. Always keep in mind, my dear Rhoads, that the location of a cement deposit

W.R. #4.

is the important item.

With kindest wishes to Mr. Rudd, Mr. Hawksley and yourself,

I am,

Sincerely yours,

H. E. Dine

(Enclosure)

1/23/03/HRD/L

Mr. W. H. Carlin, Electrical Engineer,
Rand, ~~Mass~~ Limited,
Johannesburg, S.A.R.

Dear Sir:--

Your favor of December first to Mr. Edison has been referred to me, as I look after the Foreign business.

It is not Mr. Edison's intention to build automobiles but only to furnish the batteries. We are commencing this month to turn out a few batteries and the output will be gradually increased as soon as the special machinery can be made and installed. There are no serious difficulties in its manufacture and it has only been a question of building automatic machines to do the work cheaply.

You might be interested in learning that the Edison battery weighing 460 pounds, runs a Baker runabout 100 miles to a standstill, at an average speed of 10 miles an hour throughout, over fairly level New Jersey macadamized roads. One hours charge will run the same vehicle 75 miles; lessing the weight of the battery reduces the distance in about the same proportion. The battery can be discharged completely, overcharged or left discharged without injury.

The above was signed by Mr. Edison and posted at the Automobile Show in New York. It will be some little time yet before Mr. Edison will build station batteries and it will be

W.R.C. #2.

several years before he can equip a factory of sufficient capacity to furnish the demand for the automobile business.

Trusting this has answered your inquiry, I am,

Sincerely yours,

J.C.

✓
1/23/03/REED/L

John Quinton Bruce, Esq.,

P.A.S.I.A.,

94 King William St.,

Adelaide, S.A.

Dear Sir:--

Your favor of the 18th of November to Mr. Edison, has been referred to me, as I attend to the Foreign business.

I will give you a statement ^{by} Mr. Edison, signed and posted at the Automobile Show, which is being held this week in New York. It was this:

"My battery weighing 460 pounds runs a Baker automobile containing one person, 100 miles to a standstill, over fairly level New Jersey macadamized roads, at an average speed of ten miles an hour. One hours charge will run the above mentioned vehicle 75 miles; ²reducing the weight of the battery reduces the distance it will go in about the same proportion. This battery can be discharged completely and remain discharged, overcharged without injury'.

Always remember, that the cost of the current is the least of the costs in an automobile. The records from the large Department stores in New York, who are using electric automobile wagons, show that the cost of the current is only 23 cents per day, while the whole cost is about \$4.00 per day. In any event, the Edison

J.O.B. #2.

✓

battery charges as economically as any. We shall have no batteries for export, as it is our intention to establish factories in all principal countries of the World, to control their manufacture and sale. The price will be in the neighborhood of 13 per horse (~~£~~13) power hour for automobile batteries.

Truly yours,

H. G. Dick

330

1/24/03/HKD/L

S. Bergmann, Esq.,
25 Odenburger Strasse,
Berlin, Germany.

My dear Bergmann:--

I have just received yours of the 10th inst. and have read Professor Foerster's report with great interest. I am anxious to hear what he will say when he reports on the next cell, which I shall bring over. He will be very much surprised, I am sure.

His fee is most reasonable and Mr. Edison was especially pleased with this and suggests that he be employed for future work when necessary. The iron side has considerably more capacity than the nickel. ~~It~~ ^{this} It is hardly necessary for me to say Mr. Edison has known ^{all} the time but it has not the great advantage which he states.

With best wishes, I am,

Respectfully yours,

H. E. L.

2/4/03/HBN/L

My dear Bergmann:--

I have your two favors of the 20th and 22nd of January. As previously advised you, I am sailing Saturday with my family on the Bluecher and will go direct to Paris and from there to London and from London I shall come to see you for a few days and go into all this matter fully.

The battery as it is now, compared with when you saw it, is at the ratio of 1,000% to 100%. All experimenting has ceased and it is now a question of getting ready for the Manufacture. Nothing but the grid die is the same as when you were here, therefore, everything has been stopped until the new machine designed for filling the cups with dry active material and closing them in place is complete, which will be quite soon. The results from this final change as far as efficiency and charging and discharging at a high rate, is something marvelous. I shall bring a small cell with me only and on which I will have Foerster make a report, same to be held until he gets a large cell to confirm the results of the small cell.

Although my automobile is ready and the battery tests out more than 200 watt hours per cell and is splendid in every particular, I have decided not to take it just now but to wait for the new battery and have it sent over later. I do not want to be in the position of explaining that the battery I have is different

S. D. #2.

From the ones to promote furnishing. Don't mention Jungner patents to anybody. It only diminishes their status and there is nothing we have to fear. Push the issue of our German patents as fast as you can, as to what to do it is arranged as soon as we can contact him.

I'll want you to come to Mr. Wilson. As you are leaving I am so busy, taking everything in place on, will have to take care of everything else.

Sincerely yours,

S. D. #2, N.Y.

Reel's, N.Y.

**Edison Ore Milling Syndicate, Ltd., and Related Companies
Letterbook, LM-282**

This book covers the period April 1902-January 1908, with most of the letters dating from 1902-1904. The letters consist primarily of instructions, sometimes accompanied by drawings, from Edison to draftsman William Simpkin regarding the plant and machinery at Dunderland. Some of Edison's comments pertain to the receipt of Dunderland briquettes at West Orange and to plant operations at the Edison Portland Cement Co. in Stewartsville, New Jersey. There are also letters concerning drawings from the New Jersey and Pennsylvania Concentrating Works.

The flyleaf is inscribed "Aug 12, 1902 - Jan 29, 1908 Dunderland Iron Ore Letters." The spine is stamped "Letters." The book contains 995 numbered pages. Pages 180-925 and 963-995 are blank; pages 100 and 102 have been removed from the book. Approximately 40 percent of the documents have been selected. The unselected items are primarily duplicates of letters that appear in the Standard Construction Corporation, Ltd., Files, General Letterbooks Series, and Document File Series.

Sept. 2, 1902.

Dr. Theo. Lehmann,

Dunderland Iron Ores Co.,

Mo on the Fjord of Ranan, Norway.

Dear Sir:

We shall want some clay and also some feldspar for briquetting. Please delegate to one of your men the task of finding feldspar around Dunderland or within fair shipping distance, also have him sink small holes in the bottom lands along river and creeks for clay. Get as many samples from all localities you can as I want to get the phosphorous low. Some feldspar and clays are high in phosphorous and others are low. Potash or soda feldspar will answer. The more iron in the clay the better, a brick clay is preferable; send samples as fast as you get them; send two pound samples as the smallest amount, four pound samples would be better, also send all kinds of Gneiss and Granite, as we can use that if of right kind. Our briquetting mixture is sixty feldspar and forty clay.

Yours,

Sept. 2, 1902.

W. Simpkin, Esq.,
London, Eng.

Dear Sir:

Arrange at once so we are shipped about one hundred tons
of the ore from the deposit we are going to work. Use bags or barrels.
Want it for magnet and briquette testing.

Yours truly,

Sept. 8, 1902.

Dunderland Iron Ore Co.,
6 Clements Lane,
London, E. C., England.

Gentlemen:

I enclose photographs of the two kilns and furnace at the Laboratory and of the briquettes. Our experiments have progressed to such an extent to warrant the building of a tunnel furnace, the brieker and cars will probably be finished within a month. We have succeeded in making a satisfactory briquette. The difficulties that have arisen are due to the peculiar character of the specular ore. There is no trouble in briquetting magnetite and other ores. As soon as tunnel furnace is working I will make a shipment of briquettes.

The total expenditures to date for kilns, furnaces and experimenting have been \$5260.25 of the five thousand authorized. A further sum will be necessary as I want to get the forming apparatus so simple that three men can attend to furnaces. I expect the output per furnace to be from 125 to 160 tons per day.

Yours,

9/9/02/WEM/L

The Dunderland Ore Company,
London, England.

Dear Sirs:--

Commencing September first, I have arranged to have our Mr. Herter located at Stewartville to keep track of all changes and adjustments which I have made or may make in our machinery, so that you will have the benefit of them in the designing of your plant, and I propose to charge his time and expenses to you from that date.

Will you kindly advise whether this will be satisfactory.

Yours very truly,

Letter No. 10.

Sept. 27, 1902.

Wm. Simpkin, Esq.,
London, England.

Dear Sir:

For the last two weeks I have been sweating blood over the spouts leading down from the S. to Roller feeds of blowers at Chalk blower. I wrote you that I changed the spouts, raised the angles and massed the ends altogether and dumped right on top of them, doing away with the inverted Y and using a separate spout for each blower. Well I have come to grief day before yesterday on account of segregation of ore in Bijou by coarse stuff rolling down cone and fines staying in middle and raising of air pressure on rolls the fines were much increased. Every chute blocked even the 60 angle chutes. The ore was bone dry yet the moment the fines increase beyond a certain amount you can ball it in the hand and throw the ball up 6 inches and back on hand without breaking. The pressure in the spout bricks it into a solid column. We found yesterday by experiments that it will stay in a vertical pipe.

You say that you think of using feed holes at the blowers instead of the roller feed. I am sure that this will be unreliable and these holes can not be used until the impalpable dust is blown out, it is surprising what a slight accession of dust will do above a certain amount. At Dunderland we shall have to contend with very wet weather over long periods and it is not a certainty that we will

Mr. W. S.

have our ore dry at all times. At Edison we had the same Dryer as at Stewartsville but we found that many days each month the ore coming from the stock house when crushed to 14 mesh was so damp that we had great trouble in getting it through the screens after magnetic separating. We were compelled to build another and smaller dryer to dry it so we could crush it to 40 mesh and screen and separate on the other magnetic separators. We have the same trouble at Stewartsville but as the pile of ore is moved from its original dump to another and returned with a hot blast of air going through stock house it gets perfectly dry. Of course the ore at Edison had a great tendency to hold moisture by reason of the large amount of decomposed or kaolinized feldspar and the rotten cement rock here is very much more difficult to dry than Dunderland which is ideal, still we do not have a second dryer as at Edison or a mixing belt as in cement and taking in consideration the bad weather at Dunderland over weather here I feel pretty well assured that the feeding by holes to the blowers will be a source of endless troubles; at the magnets it will be O. K. Ballentine uses holes here on crude ore but our crushers do not make fines like the 3 High and the ore is very dry so there is no comparison with actual conditions.

We are now constructing at the S. dumps at Chalk blower two feeds instead of roller feeds, feeding into the spouts we use two screens and run the two screens by a sprocket from the lower pulley of the S. by a single chain and idler. We use a two and fifteen shaft with our regular bearings. On one end the screw pitches in one direction and on the other end it pitches in the opposite direction. The pitch is 6 inches. Thus each screw carries ore to

#3 W. S.

the right and left and at each end the spout is made square about 6 inches from end of screw thread, the stream is split by a sheet of iron and drops into two spouts. Thus one shaft with its double screw serves 4 spouts, the other screw the same number. The angles of spouts at 60 & 56. The feed is set to give a little less per hour than the roller feed below, in our case 18 tons is fed by the screw into the spout and the roller feed is set for 20 tons. I have provided for any contingency by putting in an overflow at roller feed hopper at blower, so in no case can the chute or spout fill up. There is no trouble to run loose ore, I will send you complete sketch when we are through with the experiment. Horter is still sick abed but hopes to return Monday, otherwise you would have received the sketches previously promised.

In re the pinions on the drive of 5 ft. rolls. At Edison we had as I previously informed you, trouble with the pinions breaking, so you can not make them too strong. We had the shaft at first with its bearings on 12 x 12 timbers but the terrible thrusts on the pinion when it had to shear the 5/8 shear pins tore the bearings away from the wood. You will have to have well anchored bearings and short centers and heavy shaft. I suppose you will connect the motor by a shear pin coupling. This is alright but as my forethought is not so long that it sags in the middle I suggest that the gears have a bronze bush and be put on the shafts like the drive pulley on 3 High at cement, and proved with shear pins and in addition a row of bolts. At first you can use the shear pins and after a while you find that the motor shear pins is all that is required you can then put in the bolts and dispense with the shear pins on gears. It is internal stress that I fear.

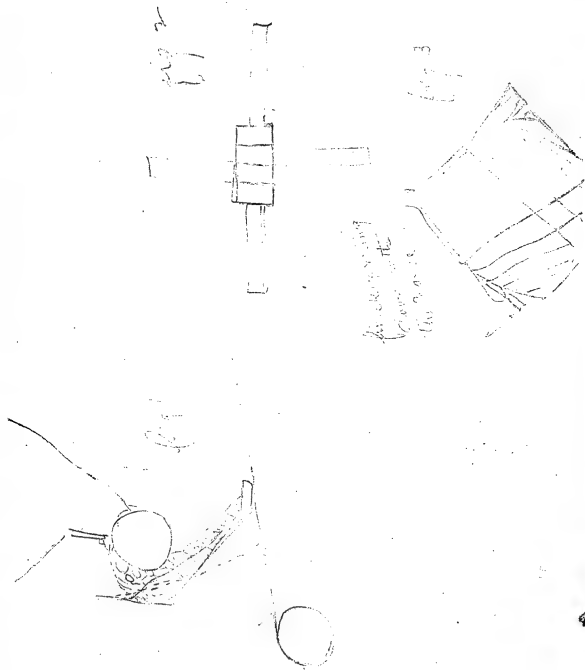
#4 W. S.

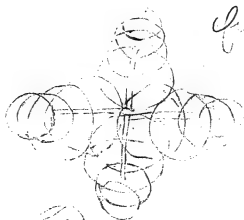
The more I see of the 3 High housing, the weakness of the ends the more I am in favor of the giant style of housing for the 5 ft. rolls.

Here is a pointer I forget to tell you about when speaking of bad effect of narrowing chutes abruptly. Fig. 1 shows the roller feed feeding stuff from bin to belt going to Bijou. The corner X caused a build, C remained stationary and D kept flowing, the ore backing up considerably and reducing capacity very much. Dotted line shows remedy. The mouth had to be widened from 10 inches to 15 inches. It will be difficult to say how many tons of ore you can feed your blowers per hour, your stuff will have no coarse in it and you should have Ballentine determine the actual amount on our Laboratory Blower. This fine ore with no coarse will also act different. We prevent to a great extent segregation in Bijou by spouts we have just put in. We use 4 spouts, dividing the ore into four parts as it comes off the belt. It is quite essential to use these distributing spouts in crude stock house for drying and also for the purpose of preventing the 3 Highs running on fines at times and then entirely on coarse.

We are having trouble with segregating in coal stock house, wet fine coal in center of cone will not run out at all.

Yours truly,





Letter No. 11.

Oct. 6, 1902.

Wm. Simpkin, Esq.,
London, England.

Dear Sir:

24 inch belt as return from Dryer to Rolls will be ample. The chute should spread returns on belt fairly well so picker can see bolts, etc. Regarding Chutes. They are by far the most serious thing we have had to contend with here, so better send detail of all chutes to me. The Distributor on top of dryer is an enormously important detail and ours here should be exact copies without the slightest change. I have not gone over your dryer shaker details as Herter is now well and we have finished the giant roll drawings which I will describe further on. The giant roll plates should be chilled a full one and one quarter inch.

All our chutes in rock stock house were too near the belt, couldn't get but 125 tons per hour as the ore from one blocked the others, men have been in there several days cutting them off, now five inches from belt. It takes 3 hours to take a motor out of the tunnel on account of no room. Twelve feet wide with a 36" belt in the center is none too wide to clean out drip and get at things. One thing you should allow for with excessive liberality where one belt dumps to another at a place depressed into the ground. On your general plans which arrived here this week, I see there are several such places. The drip and also the removal of motors, etc. is a serious thing at times where delay is great from want of room.

#2 W. S.

Regarding the drip from belts: There are a number of places here where it is impossible to get even a hose under to clean out the drip at head pulley, for instance, the dump of conveyor bringing returns back to chalk 3 High there is no space and we are compelled to keep two men there to keep belt free until we can change it, also there is no room to work in and altogether its a horrible proposition. The leakage down into the room below was so great that one couldnt see five feet. We were compelled to use a hermetically sealed floor since which the 3 High floor has scarcely any dust.

Dont use any iron set in the brick work of air vent or fire doors at Dryer furnace use brick arch, also the doors should be faced with fire brick so that no iron is exposed to radiation or flame. We have a fire door with brick around most of the face exposed but the iron exposed is melted. The square casting set in brick work for the air vent above fire door has all melted.

I think you better send your redesign of mill motors which will be employed. We have found a lot about motors. The oiling, brushes, crossing of armature and fields, stability of base, etc. We have a fan on armature to internally circulate air within the chamber to a success. Do not attempt to use the end of the motor shaft for a fan, that is a failure, use the regular desk fan and secure it firmly at the opening in gunny. We have changed our gunny chambers considerably. There is a very decided relation between the square feet of gunny and the horse power of the motor. We can give you this when you are ready. There must be no leaks into the chamber except through the gunny itself.

I think you better send drawing of the removable baffle plates of the blowers so one can be made and actually tried by

3 W. S.

Ballent^{ine} on Norway ore in the Laboratory dust blower to get it right and obtain proper data as to speed, fans and feed per hour.

I spoke in a former letter about the great trouble we have had with the chute under the 3 High chalk. Well we have had to make another change it would block up. We make the chute the full width of the inside of the housing, run it down straight it delivers ore at right angles to belt but the ore strikes the opposite side of chute before it reaches belt and dont scatter fig. one there are wooden extensions to keep ore scattering.

Did you know of the serious mistake somebody made in the chute from the highest elevator down to the screens in the clinker grinding plant, well the angle is 45 all right but its side angle is only 26 degrees and nothing will go through it and we hav'nt the hight of the elevator to correct it. I have sometimes thought that I would like to take the man who made that chute boil him in oil and hang him in hell to dry. I am going to get 500 tons an hour down there somehow but just how I do not know except to raise the elevator, all of which shows how dead easy it is to design a crushing plant.

Now for the Giants. 1st. Make the plates of equal length. They can then be exchanged so that the ends which gets no wear can be shoved to the middle and thus double wear got out of them. The wear is mostly in the middle. The holes in the mandril should be laid out very accurately, otherwise there will be great trouble to exchange plates. I have had Horter lay out a sketch to explain matters. Make the mandrills solid dont core out anything where you have shown it. Use only four sections, face only the outer edge

#4 W. S.

of mandrill sections. Have changed the sections of the shaft a little from your sketch. Notice the coupling.

That side extension on big girder better be made separate and of steel. The wooden separators should be split as shown so we can make changes if found necessary without necessity pulling out long bolts. The washers on long bolts should be white pine at first to ascertain if they crush. The hardest kind of white Quartzite will crush the pine and if they crush use maple. It will give us an idea how hard the rock is.

Dont use thrust collars at both ends of a roll. The fitting is difficult and if anything moves to separate housing etc. there is trouble. Use thrust only at one end, then there is no trouble, you have flexibility. The thrusts on the giants are particularly terrible at times. The thrust should be so the Rabbit shell can be removed quickly without having to bother too much with thrust devices. The sketch sent will illustrate the thrust bearing which is O. K. I have also shown the flap at the end of shaft so ones hand can be inserted to feel the shaft. There is a little ledge over top of it to keep dust off. You will notice I have diminished the rabbit in the recesses, also added recesses up nearly to the end as we had trouble here from rabbit spinning loose. I think you better not put in the recesses in housings B 123 why not make them plain face. Better make the guiding key of housing and girder reversed, have the key on the girder and the recess in the housing and increase width to five inches. In taking out a shell use a block, the outer surface which is the same diameter as shell and bored same size as shaft, then when you are drawing out shell keep shoving in the block, the shaft will then rest on the block when shell is en-

#5 W. S.

tirely removed. The block you might say is the lower half of a split bearing, I think if it is 10 inches long it will be sufficient.

You should use the oil screen cup we use on the giants. Its O. K. with the change we made notwithstanding that we are to use a wiped lead joint in the iron pipe system things will get in the oil and its a very serious thing to have oil ducts stopped in a giant roll, they are not easily handled and the whole plant and mine shuts down until they go, hence we should use everything that will insure continuous operation. There are so many miserable little things that cut half the time off from a days run. The shells should go in rather snug and therefore sometimes rust or stick badly so I think the bolts drawing them out should be increased from one inch to 1 1/2 to 1 3/4 inches. You will notice I have increased the number of recesses to hold the babbit. There is a tendency to spin the babbit between the recesses.

Regarding the babbit, I think you better use the babbit we used on giants at Edison. It was the third kind we tried and it worked O. K. it was special for the giant only. Reeves of Philadelphia made it. I can send a bar and you can have it analysed and made over there if desirable. Its a mean babbit to pour and must be done just so. We had so much trouble with it that we sent the shells to Reeves finally and had them babbitied, but I guess you can get it done there all right. Look out and do not bore out all the peined part as it then is spongy.

Stuffing Box B. 124. Put extension on and counterbore into housing. Be sure and make a good fillet in the keyway where plates go. The thrust on the plates are tremendous.

#6 W. S.

Use eight bolts to each plate. Separate the plates in the middle half an inch, this will give margin for casting. If there is any doubt you can make it $3/4$, using eight bolts gives wider and better teeth. Carry the boss on outer and inner edges of plates clear across, this will strengthen them and will be good when plates are shifted.

Regarding Bolts B. 135. Why not make the 126 lot exactly the same, and the 18 lot the same then you will only have two lots of bolts. Its important that the manufacturers follow your drawings as to ~~the~~ fillet on bolts. Our men twisted them off repeatedly even with a fillet until we cut their 5 ft. wrench off to 3 ft. Is there enough depth in hole to mandril to top good with the length of bolt shown. You remember that tall inspector who inspected giants and 36 Rolls. He was a lobster, he passed a lot of very bad work on the rolls from which we are now suffering and had to change. Good inspectors will be very important for you.

The depth of the slot in Bolts on B. 135 should be greater, three quarters of an inch deep. The tooth of the wrench wider at the end than at shank then it will not come out and scatter the jack tars on the winless. Dont core the holes in the foot of the girder B 121. Hatchet the holes after they are in place. The sheet steel lock of the bolts holding plates on in 135 B. should be of such a width that their tops do not come flush with the bolt head, then the slot in the bolt head can be slightly over and thus prevent the lock piece from coming out.

I want to call your attention to a new point about couplings

#7 W. S.

of shafts. On the Chalk 3 High we have been troubled with heating of the bearing next engine house on the driving roll. It is caused by the fact that the big bolted coupling connecting the drive shaft with the 3 High shaft was not solidly secured to the small shaft and the side vibrations due to concussions pulled the coupling $1/8$ inch towards the 3 High, then there was a big thrust against the thrust collar in small shaft bearing consequently heating. These couplings must be absolutely secured so they can not move endwise on the shaft, we have riveted ours. I think there should be a recess and bolted plate or forced on through, I am not sure these concussions would not move a forced on coupling.

Neither Herter or myself quite understands the starting device for giants, something of that kind would be good. Another point, the conveyor under the 3 Highs (Chalk) going to blower house has its head pulley, motor, etc. up in ~~the~~ trusses, the bracing and stability is very bad and the jar and swaying is quite serious. We are now getting ready to do a lot of bracing. As your conveyors are in the trusses and as some long conveyors with heavy gravity pulls we also end in the trusses. You should have these stressers provided for by good bracing. There is not only side motions but up and down motions.

Have a good finish on the shaft of giant where it is bearing surface.

Yours truly,

W. S.

Letter #16

March 30, 1903.

Wm. Simpkin, Esq.,
London, England.

Dear Sir:

I have gone all over the 6 record books of cement runs and have got things pretty well worked out. I will send results of whole when I go north but thought I would send you briefly some conclusions.

- (1) Should be covered closed shed for say 40 cars in winter with enough steam coils keep ore from freezing in cars, also journal oil from getting solid.
- (2) Steam pipes resting against hopper under Giants to give heat to iron of hopper to prevent ore freezing and blocking hopper.
- (3) Pinion and large gear into which pinion meshes are altogether too narrow; that has been one of the troubles on our conveyors which were heavily loaded, for instance 104. Top mixing belt, stress at circumference of 48 head drive pulley 1500 lbs., stress (allowing 80% efficiency for gears) on pinion about 1000 lbs. while the gear and pinion is more than ample for strength, the pressure per square inch is altogether too high even if gears were on dead pitch line but they never stay there and on a 25 H. P. conveyor I think length of pinion should be atleast 10 inches, not for strength but for diminution of pressure and there should be good oil casing. The large gear into which pinion meshes can be quite light. On your 50 H. P. conveyors pinion should be increased still further. These

W. S. 34.

conveyors with heavy pull out a large pulley is a peculiar combination with a train and motor, no pinion must be abnormal.

- (4) Look ^{out} for heavy width gears on shaft of Roller feeds.
- (5) Look out for excessive pressure per square inch on all pinions.
- (6) 3 High Ropes. We are going to turn down couplings between 3 High and pulley drive to insert an inch plate. This ~~permit~~ having a rope always spliced and ready and the plate being taken out, rope can be got in. Four bolts in coupler will be enough as more cause delay.
- (7) Twice the number of side guide idlers wanted on bottom of conveyor belts, also these idlers ought to be two inches longer.
- (8) Freddy and I have made several flexible couplers for motors at our little Laboratory. I have one now that is perfect; will send you drawings from Cement Works.
- (9) You remember we had a sprocket wheel on 3 Highs to drive roller feed. We are going to utilize this to expedite putting in shear pins from which a great loss of time is had. 5 or 6 ft. away we put a worm wheel on shaft of which is a sprocket, by a pin in chain we connect quickly and by hand crank bring roll around so shear pin holes match. You will have to have something like this and this is simple.
- (10) Do not fail to have the blocks connecting top and bottom of housing of 3 High strong and rigid. The trouble we are having with our pulley drive bearings is due to the shock shifting of bearings in housing of driven roll. , not a permanent movement so as to put shaft out of line but a concussive springing and this is transmitted to pulley shaft.
- (11) Stud bolts locked by small wire running though heads where bolts are around a circle is not sufficient; the wire bends by constant shock. Either a larger wire or something else for locking

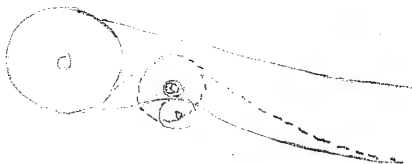
W. S. #3.

on concussive machinery is necessary, oil joints, etc. soon leak.

(12) Bolts with nuts and cotters on Rolls do not lock except use R. R. Car cotter with slot and cotter taper so it is driven in dead against head of nut and bent.

(13) What size (i.e.) diameter and length pinions you going to use on Motors driving 3 Highs and other rolls. Remember shear of pins more than doubles pressure. Be sure have plenty dope in casing and put in a plug so oil man can tell when he has proper amount of oil in all oil casing. That's something we didn't have at cement, consequently lots of our gears run dry and out bad, especially where pressure per square inch on teeth was high.

(14) On conveyor belts greater arc of contact on head drive pulleys are more efficient for bite or adhesion than longer slack we put on Idler thus:



The idler was ordinary diameter with heavier shaft and larger idler bearings. This did the business but the idler bearings gave lots of trouble. Make yours as in dotted lines and closer up to pulley to increase the arc of contact and bite, use say 3 inch shaft and regular self oiling chain bearing well secured on ways use 24 inch

W. S. #4.

or more wheel. With 25 ft. slack this should not slip on heavy loads.

(15) You can not make Gunny chambers too large, the floor should be double with thin sheet iron between the two floors. Ditto on top of chamber. Around bottom use wood, run about 10 or 12 inches high and stiff, to this the gunny can be secured. Cracks in floor at cement were cause of great trouble, also repairing of gunny at floor line as dirt collected at bottom outside and bulged gunny in. The board around bottom will stop this. Use stiff framing. The door we used was a failure. It was not self closing. The joint was no good, be sure and get a lap door always good and tight and powerfully self acting closing. Hand fan should be special (ie.) capable of running continuously without heating. The supply of oil and oiling devices should be good. The connections should have one pole of a different kind of clamp than the other so men can only connect fan to run in the right direction. The fan should be made so it can only be put on shaft one way and pinned or secured so can by no possible means come off, also fan blades themselves all riveted, no screws. The whole fan should be clamped to pedestal, and balanced. Bergum could make these. Have about 16 inch fan. If it is possible keep flexible coupling within gunny chamber.

(16) The shearing device on 3 Highs gets loose and shears, look out for this.

(17) Motors running small air compressor without a high speed fly wheel are a failure. At highest point of compression the amperes run up enormously. We are going to use pinion in two bearings and on one end pinion shaft put a fly wheel with shear pins, as this is high speed it need not be of large weight. With motor flexibly connected we hope to keep amperes reasonably even. Use the unloading

W. S. #5.

pressure device otherwise burn out motor.

(18) The width of Commutators on Bergmann motors are insufficient. They are narrowed to cheapen. It would be better to increase them fifty per cent, by employing say a 25 H. P. commutator on a 15 H. P. motor and so on. His break rigging is a complete failure where there is concussive jars. One can Street car device best. There is no reason why motors driving gearing should not be fixed down once for all on base without a lot of adjustable things only required for belt driving. We had lots trouble with base bolts shaking loose. Remember this as a fact that the ordinary man does not set pinions on pitch line where the construction permits of adjustment not one motor pinion in ten were set right at cement, they were either not on pitch line or one edge did all the work, in addition the motor moved because bolts got loose. In my opinion all of the gearing should be framed together by cast iron assembled in the makers factory and doweled. Then the vibrating structure of the Mill would not be serious, otherwise there is bound to be continuous and never ending trouble.

(19) Raw hide washers on idlers are not the thing. They shrink. I am going to test for the right thing and will send you result.

(20) Could you have stayed longer I would have outlined the electrical scheme for operating plant (ie.) starting, stopping, etc., but when you are ready will write out whole scheme.

(21) Do not use any glass sights in motor bearings, they break from the jar. They can be a locked overflow plug. The oil system management we will establish will keep plenty oil in. Don't forget that long heavy chains are a necessity, also that one of the worst troubles we have on motors is that the oil follows the shaft through the wool and throws on commutator, etc. Its bad for commutator and

W. S. 44.

and bad from loss of oil, as it makes it difficult for oil management to know when to fill. If this is stopped then it will be easy because when after a certain time all oil is withdrawn to be filtered and fresh oil put in and this would only be a question of date.

(22) Keep in mind when arranging motor and gunny chamber that sometimes the motor must be removed or the armature removed in case of cross or burn out and want room to get out of chamber without tearing it down as at cement and also way to get motor in and out building as it takes Sunday and all Sunday night to remove one under Rock Stock house. Were this part of the running mill it would be very serious.

(23) The springing and bending of the fan shafts in blower house because shaft too small is serious. Four inches is not too small diameter.

(24) More anon. Dont fail send design of bricking furnace with marked dimensions so men can work from drawings.

Yours truly,

Apr. 17, 1903.

Dunderland Iron Ore Co.,
London, England.

Dear Sirs:

As a matter of record I beg to confirm the following cable sent to Mr. Dick this day. "Dick, Diocesis, London. Remember not single complete and final drawing Dunderland received or approved by me. Has anything been ordered? If so warn company of danger. Signed Edison."

Yours truly,

Apr. 17, 1903.

H. E. Dick, Esq.,
London, England.

Dear Sir:

As per instructions from Mr. Edison I beg to confirm following cable sent you this day. "Dick, Diocesis, London. Remember not single complete and final drawing Dunderland received or approved by me. Has anything been ordered? If so warn company of danger. Signed Edison."

Yours truly,

Letter No. 17.

Wm. Simpkin, Esq.,
London, England.

Dear Sir:

I am preparing for you full inspectors report and other records. Hope to send you soon as well as other things I have found wrong when taken apart. Will send as soon as ready. Several very bad things have developed which I did not know of and which is going to be very serious for us financially.

1st. The shafts of Blowers are one and fifteen sixteenths dia. and supported several feet apart, they have bent so bad that we shall take all apart and put in four inch shafts which is none too large for the distance. They not only have bent but the packing collars have cut them very deeply by the wobble.

2nd. The space for motors was so small that gunny chambers were no good, as they could not be made any larger than the motors, result was that they worked in thick dust. The dust burnt in Com-mutators and the later are worn out and motors wrecked. There was such a terrible congestion and lack of any space that nothing could be practically done to save them. I am compelled to use a sprocket and put motors between roller feed and blowers, this permits all the motors being in one long continuous gunny chamber with side door so motor can be removed and taken between the dust bins and around the back of same.

*Received in letter
of May 2-1903*

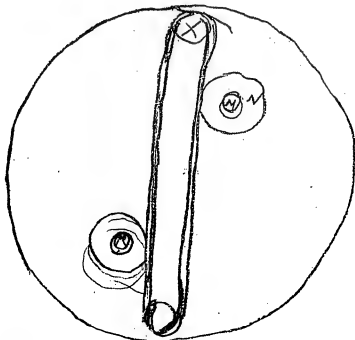
Apr. 18, 1903.

#2 W. S.

3rd. All the pinions and of course all the gears of drives on Conveyors are too small. They are ample for strength but the pressure per square inch is such that the heavy loaded conveyors have teeth worn one third the way through, consequently the vibration got so great that towards end of run the brushes could not be kept in the Commutator. The jumping of the brushes produce sparks and these heated commutator so that the maximum capacity of the 25 H.P. motors got reduced to twelve and then they had shut parts mill down to coal. On top of Rock Stock House the shaking of the structure was terrible and they had got out plans to belt down to a motor at the earth. I put in wider gears with pinion between bearings, put in new flexible couplings and we have been running mixing belt for several days. The motor is loaded to full capacity, it has neither spark or jar and the structure only receives a small jar from the wear on the other pinion and this would go out if it had been wider.

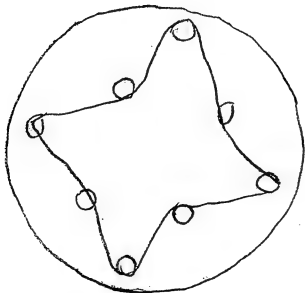
How long before you will send me drawings so I can put on the final O. K. Haven't received a single one that is final as yet. Are you sure that you have enough men in your draughting department, I fear you are going to get into a hole before long. It may be possible that the motors on the 3 High and Crushing plant rolls will need flexibles between gearing and shafting to prevent sharp vibration waves dancing the brushes. We have tried several flexibles on our smaller motors and have one that works perfect. It works so perfect we are making one for the third 36 inch Roll On motors it is made thus:

#3 W. S.



Sixteen diameter, inch quarter pin "X". Wheel "N" is two half inches. Pin "M" inch quarter. The belt is double and stretched all around edges by harness maker, the width on 25 H. P. is two and half inches. The disks are turned all over and balanced. When shafts out of true the wheels run up and down belt and hence, the easier they run up and down the less does the vibration wave go to motor; with the one now generally used there is considerable vibration transmitted and it is very unsatisfactory. The following is generally used in this country. It does not slide easy enough.

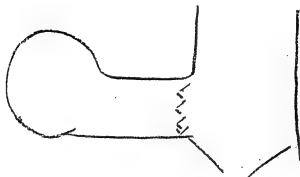
#4 W. S.



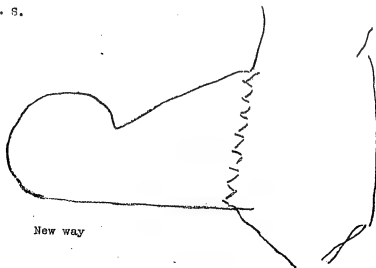
I have Barnes here experimenting on gunny chambers and we will soon be ready to give you full data.

Could you arrange blowers so there is a greater height for baffle plates; it would greatly improve them.

Old way



#5 W. S.



New way

There is a great difficulty in making a motor pinion and gear casing and bearings so oil in casing will oil bearings. Look out for this.

We are changing exhauster from top of Dryer to Earth on concrete across the incline and running a downcomer pipe from top dryer to exhaust, putting in a cyclone dust catcher and by use of a 12 inch screw at bottom clean out dust catcher at intervals and depositing it on 102 conveyor. The congestion, heat and vibration was loud at the top of dryer.

We have trouble with bottom belts of conveyors running to one side, also getting under edge of side chilled idlers and ripping off the rubber the whole length of the belt. The idlers should extend way down close to base and also be higher and be every 50 ft. apart on bottom or return side. The top we have very little trouble with.

Yours truly,

W. S. W.

*Admitted in
letter Nov 5-1903*

Apr. 23, 1903.

William Simpkin, Esq.,
London, England.

Dear Sir:

Will you kindly let me know if you have received all of
the following letters from me.

Letter No. 1	August 12, 1902 ✓
" " 2	August 28, 1902 ✓
" No number	August 28, 1902 ✓
" No number	August 28, 1902 ✓
" No. 3	Sept. 2, 1902 ✓
" " 4	Sept. 5, 1902 ✓
" " 5	Sept. 5, 1902 ✓
" " 6	Sept. 6, 1902 ✓
" " 7	Sept. 11, 1902 ✓
" " 8	Sept. 15, 1902 ✓
" " 9	Sept. 22, 1902 ✓
" " 10	Sept. 27, 1902 ✓
" " 11	Oct. 6, 1902 ✓
" " 12	Oct. 13, 1902 ✓
" " 13	Nov. 3, 1902 ✓
" " 14	Nov. 10, 1902 ✓
" " 15	Nov. 10, 1902 ✓

#2 W. S.

Letter No. 15	Nov. 26, 1902✓
" " 16	March 30, 1903✓
" " 17	April 18, 1903

Yours truly,

Thos. A. B. S.

Registered

Acknowledged
May 14, 1903

May 11, 1903.

Dunderland Iron Ore Co.,
Fitzalan House, Arundel St.,
London, W. C., England.

Dear Sirs:

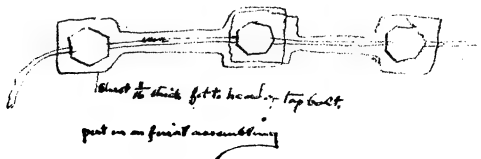
I have received complete drawings for the fine crushing rolls of the Dunderland Mill and approve of the same if alterations are made as to foundation and other details as per memorandum below. These alterations are the results of actual experience obtained on the same character of rolls at the Cement plant. Please acknowledge receipt of this letter. I would like the final drawings with alterations made for filing away for future reference.

MEMORANDUM

B-137. There should not be more than one eighth of an inch between the plates, one quarter of an inch is too much. The edges of the plates, that is the last corrugation will cause edge to chip off, sometimes this chip will be several inches long and one to one and a half inch deep. We leave off the corrugation at the edge so the ore can not get hold of it to break the edge Thus:

#2 D. I. O. Co.

B-180. Tap bolts all shake loose, the wire does not lock them, it merely prevents screw from being lost. The only way to lock them is by fitting sheet iron links from head to head and then use the wire. Thus:



Regarding the nuts on bolts the same objection to the wire holds. The millions of sharp concussions received daily shakes every nut loose. Instead of a hole put in a slot extending down under head of nut, and drive a taper sheet cotter in and bend over. The taper should not be too great and the thickness of the steel considerable. This is quite a little job which can be done on final assembling, but is essential.

The oil xx drain at bottom should only have a pipe long enough to fasten the rubber pipe to, and the same should be locked. The long pipe breaks by momentum.

B-181. is all right.

B-182. Putting thrust collar on both ends necessitates precautions against canting of rolls which will produce a pinch. The precautions are that the ore shall be fed to the rolls evenly and that no segregation of the ore take place, that is to say that coarse ore will not go down the chute to rolls on one side and fine ore on the other. Otherwise 182 is all right.

#3 D. I. O. Co.

B-123. All right except locking with slot and taper cotter, which applies to the whole roll, except perhaps the large housing bolts at end which may be locked in another manner.

B-124. I am doubtful if we do not still need the key across the ways to hold the fixed shaft bearings in place, if it gets out of line with drive shaft there will be trouble. The concussion will strain tapped bolts and draw the reamed bolts. We have roll plate bolts on regular rolls drawn so much that we couldnt get them out. It is almost incredible but nevertheless true.

B-253. I have never yet used in a roll anything but a hammered iron shaft, and this under the advice of John Fritz of the Bethlehem Steel Co., I therefore advise hammered iron shafts, not that mild steel is not strong enough usually but on account of gradual crystallization under powerful and exceedingly minute concussive strains.

Coupling on shaft will slip no matter if it forced on.

There should be a countersunk plate and bolts. We have had serious trouble with ours here and even after riveting it has started the riveting. It is difficult to see where this thrust comes from but it is there and is very powerful. Otherwise B-253 O. K.

B-254. All right. Look out for warping after finishing. Our ways here sprung one sixteenth of an inch, so roll had to be dismantled and replated to prevent bearings pinching on the ways.

B-255 all right.

B-256 all right.

#4 D. I. O. Co.

B-257. Grooves after machining should be polished.

Note. The standard outside the roll for internal oiling through long shaft should not be put on board floor but on ^{beam} steel/or foundations to prevent jar.

B-258. The shaft cover plate will leak oil without lead or other packing.

B-259 all right.

B-260 all right.

B-261 all right.

B-262. Flexible coupling to motor.

B-263. Must be a good job or it will be sure to leak. We used drawing paper in joints.

B-264. We had to increase diameter of shear bush to two inches as concussions hammered the socket oblong when we had a smaller diameter and steel will be worse as it can flow. Should advise two inches as minimum with perfect fit. It is extremely essential. If you want to get a high average run each day that the shearing device should be made by the best tool maker obtainable, that the bushes should not be tempered too soft so edges will get rounded or too hard so they will crumble and the faces of the shear bushes should be perfectly flush with the plate and come perfectly together so that a perfect shearing device is had, then there will be no trouble.

#5 D. K. O. Co.

Are you satisfied that you have room enough between gear casing and shear to get the stub sheared bolt out easily. My experience is that the workman never realize how good a job this shear device must be and we then as a rule have to make it all over again.

The taper pin to bring shear plates together has proved a failure here, gets all battered up and on two occasions men forgot to take the pin out. We use a mark.

The shear pin clamp has also proved bad, the sharp edge of the slot causes it to act as a pipe tap. We have rounded the edges of slot but it is not ideal.

Regarding the gears. The strength is all right but the pressure is very heavy for a 200 H. P. rate the pressure is 2100 pounds for driving and double this for shearing. It is not a question of strength so much as wearing surfaces. If gears were theoretically perfect and we always got rolling friction, etc. it might be all right, but we do not get it. The speed and pressures here are very great and the wear will be proportionally great; another thing is that we have cast gears. The gears should have a minimum face of not less than sixteen inches and I believe eighteen inches would be much better. They may look strange but that is no reason they should not be used. The gear body could even be lightened, because its not a question of strength so much as wearing surface. On the spring rolls only a small part of the work or stress goes through the gears. Both rolls are practically driven direct through the medium of the ore. The gears preventing slip and consequently wear on the plates, and in the case of the regular rolls without springs, the gears do not transmit one quarter of the stress besides require very much less power, but on the fine grinding rolls the whole of a great power goes wholly through the gears, hence the gears should

#6 D. I. O. Co.

be all out of proportion to the gears above mentioned. You can make no mistake by using an 18 inch gear and in my opinion make a serious one by using 12 inch.

The jar of these gears makes it absolutely imperative that a flexible be interpolated between the motor and the drive, otherwise the jump of the brushes and sparking will be prohibitory.

B-265. I recommend the use of a regular engine piston and snap rings. The relief hole at tail end should be reduced to half inch. Provide a steam pipe in contact with cylinder to prevent freezing in the winter.

B-266 & 267. It is very desirable that ropes already spliced shall be in readiness, it is difficult for men to splice in mill and desirable that it be done outside and brought in, with the tightener rigging it will be difficult to do it without you make a change there. The position of your tightener does not permit of a clear separate room but I suppose you contemplate making the room so the air cylinders will be in motor room and the ways in roll room. It will not do to have ropes ran into motor room unprotected, as the air movement due to moving rope brings in lots of dust. You can not be too particular with this partition to keep out dust. We use matched pine, then cover with ten cent canvass and paint the canvass. Will not your rope strike foundation when starting up?

B-169. All right.

B-196. All right.

#7 D. I. O. Co.

C-116. These rolls should be made solid. There is nothing gained by hollowing out and there is a real danger from chipping off edge for the reason that sometimes the rolls will cant.

C-139 - C-140. Is decidedly objectionable. The concussive throw of the housing will not be less than one sixteenth of an inch and sometimes more. The gear bearings would not work at all. You should have cast iron girders atleast thirty six inches wide, well ribbed up in direction of throw and about two feet deep at the foundation, and somewhat bellied in middle. Have a foot on the girder where it rests on the foundation, say four feet wide and well secured by bolts to a very massive foundation. The greater the mass the better. If this is done the housing throw may be reduced down perhaps to one sixty fourth of an inch and your gear bearings will work all right. No one can realize what these throws are until he sees the rolls doing work.

C-141. All right.

C-142. All right, except as to width.

C-143. Forced coupling uncertain advise recessed plate and bolts. Motor shaft have flexible.

C-144. All right.

B-175. All right, except that you may have trouble in getting out plate bolts. Handril will move. I advise pinning in addition.

B-186. All right.

Yours very truly

Thomas Edison

Registered

*all received per
Mr Simpkins letter
May 19-1903*

May 19, 1903.

William Simpkin, Esq.,
Fitzalan House, Arundel St.,
London, W. C.,

Dear Sir:

I beg to enclose you herewith copies of letters as follows:

Letter no number	August 12, 1902.	Letter No. 9	Sept. 22, 1902.
" No. 2	August 28, 1902.	" " 10	Sept. 27, 1902.
" no number	August 28, 1902.	" " 11	Oct. 6, 1902.
" no number	August 28, 1902.	" " 12	Oct. 13, 1902.
" No. 3	Sept. 2, 1902.	" " 13	Nov. 3, 1902.
" " 4	Sept. 5, 1902.	" " 14	Nov. 10, 1902.
" " 5	Sept. 5, 1902.	" " 15	Nov. 10, 1902.
" " 6	Sept. 6, 1902.	" " 15	Nov. 26, 1902.
" " 7	Sept. 11, 1902.	" " 16	March 30, 1903.
" " 8	Sept. 16, 1902.		

Kindly acknowledge receipt of the above and oblige,

Yours truly,

Registered

COPY.

London, W. C., 13th Dec. 1907.

Mr. Thomas A. Edison,
Orange,
New Jersey, U. S. A.

Simpkins. A. & Co.
Ahead on patent of Magnets.
N.

Dear Mr. Edison,

As you are aware, no patents have been taken out by you on the particular form of construction &c., of the magnetite magnets. Now that Mr. Ballentine is with us we have been talking the matter over very carefully with our Patent Agent, who is of opinion that we can make certain claims on the magnetite magnets sufficient to form a patent specification. In the circumstances we have thought it advisable to go ahead in the matter, and as soon as the patent claims are reduced to specification form we propose filing them in England and abroad. This, of course, is entirely subject to your approval, but it seems that we cannot possibly do any harm by endeavoring to strengthen our position as regards the patents of our magnets, especially in Norway, and we think that you will acquiesce in this view. The Secretary will be writing you an official letter putting the matter in order, and, of course, your sanction is required before we can do anything.

Hoping you are in best health,

Yours truly,

Edison Ore Milling Syndicate, Limited

F. H. Pollen,

Managing Director.

Registered

July 3, 1903.

Edison Ore Milling Syndicate, Ltd.,
London, England.

Dear Sirs:

Your favor of the 19th ult. came duly to hand, and in
reply I beg to state that I have sent a note to me Simpkin in regard
to same.

Yours truly,

Copy enclosed.

Registered
Acknowledged
Oct. 26, 1903

Letter No. 21.

William Simpkin, Esq.,
London, England.

Oct. 12, 1903.

Dear Sir:

The following is my notes on drawings sent by you.

C.-105 O. K.

C.-106 O. K.

C.-114 O. K.

C.-131 O. K.

B.-121 O. K.

B.-122 O. K.

B.-123 O. K.

B.-124 O. K.

B.-125 O. K.

B.-131 O. K.

B.-132 O. K.

B.-135 O. K.

B.-134 O. K.

B.-135 O. K.

B.153 O. K.

B.-162 O. K.

B.-216 O. K.

O15. This hydraulic may be too light.

B.342. Think this flooring too weak. All the big pieces are lifted

#2 W. S.

up on the teeth and top of dipper and dropped into the skips, sometimes they drop 3 ft. or more. Pieces weighing 10 to 15 tons do not give a gentle tap. The strain due to impact is terrible and it takes strong cars to stand it. We had at Edison, cars with outside stringers, 6 x 10, inside 4 x 12, the top was the same. Cement Co's. car is stronger, both are entirely too weak for 6 ton skips, therefore you can judge what B-342 will be. Our axles are 3 1/2 and are entirely too light and you will have twice the load and four times the stress from impact, due to dropping big chunks from the dipper top. Don't forget the extra pieces of timber on top of car above the regular floor to guide the skip on each side of it. Rear end of skip wants six one inch holes to permit water to run out. Otherwise skip O. K.

C-135. O. K. All bolts on the cheek will get loose if not perfectly cottered close to nut.

C-136. Hopper door should have plate inside to keep mud from coming on joint, see sketch No. 1, otherwise O. K.

C-137. My impression is that on the first five foot roll, I advised steel beatings for hopper, as the chunks are large and the pounding is terrible. The roll throws the chunks out of dead line. You better stiffen. The other five foot rolls will be O. K. in this respect, except that your wear plates will have to be renewed often and you should contemplate the placing of the wrought iron with chilled ends.

C-148. O. K.

B-269. What kind of a rigging are you going to use to permit one man to raise roll doors. We use hand windlases and ratchet; this makes it easy for inspecting plates, which should be twice a week.

#3 W. S.

B.-269. Is the arrangement on the first five roll for removing hopper heavy enough? I think dirt will get in and disturb your trolley. Dont you think it should be covered.

There will be a lot of spill of ore from open place under the shaft, I can not say if Vanderland ore will give enough to be a serious trouble, but you better be prepared for trouble. I also think that on the first five foot rolls, that the bottom edges of the hopper underneath rolls, having no support will be pounded out of shape the first days run. Cant you manage to strengthen the edges, the more the better.

B. 270. I think hopper under 3rd 5 ft. is rather unstable, as you have two chutes hung to it, one to the 4th set, the other to the 5th set. You will certainly have trouble here.

B. 289. The bottom of this hopper is not backed up enough. At Edison under our four foot rolls we had one inch plate backed up by three feet of solid timber and it bent it so bad after one months run, that ore wouldnt run out of hopper, the cavity filled and made a non slipping surface. We kept things going by renewing plates. Now this was not under Giants. The Giants at Cement are smaller than at Edison and have smaller chunks, yet we have a thick steel casting for bottom. With your Giant the chunks will be very much larger than at Edison and owing to the greater weight of the ore from high quality and the great fall of 26 feet, the great speed, due to the combined effect the roll and gravity the concussions will be gigantic, over an area of 2 or 3 ft. from the center line and the backing you have would last no time at all. On the other hand if the mill management is well drilled and taught that the hopper must never be run so empty, that the ore will strike the steel plate but always the ore you will have no trouble. It is for you to judge if they can be

#4 W. S.

trusted to do this. Something is wrong with the agitating roll of the roller feed mechanism. Can not understand it, seems to be down too far, cant understand big gap above roll, please send more details of the roller feed, as this is very important to have this just right, otherwise you will have bridging of ore in the hopper and this is fatal to your daily capacity being kept up. I want details also of spur gear and drive. The hopper chute above roller feed and in which agitating roll is, seems to be unstably secured. How can men get in with crow to break up an ore arch should it occur, as it does often.

B.-290. See 289 B.

B.-291. Ditto.

B.292. Think there should be a removable wear plate on sides of roller feed as the wear here is very considerable and it will be expensive to throw away the whole side because a small section is worn, chilled iron would be the thing.

B.293. See notes on 289 B.

B.291. " " on 289 B.

B. 293 See previous notes.

B. 297. Ditto.

B. 299. The wear on the chute from roller feed to 1st. 5 ft. roll will be very great at the point where it starts to narrow and all the way along the incline. The wear will be so severe that nothing but chilled iron will be satisfactory.

B. 300. See previous remarks.

B. 301. "

B. 304. See remarks B. 289.

B. 305. O. K.

#5 W. S.

B. 306. See remarks on B. 269

I fear that Dunderland ore will soon cut out all the chutes, and so rapidly that you must contemplate renewing the wrought iron plates with chilled plates, even the chalk is cutting the bottom out of our chutes at Cement Works where ore goes from S. dumps to the blowers and we are getting ready to replace by chilled plates. See sketch No. 2. If this is true of a trifling amount of a soft material, what will it be with heavy loads of cutting ore or heavy specific gravity as with Dunderland.

B. 307. See 306.

B. 308. Think cast iron cheek plates are not strong enough on lat 5 ft. rolls. There is a prying action of the big chunks between rolls and cheek plates, which will break almost anything except thick steel castings. You will note that in all my remarks that I fear your hopper arrangement on this roll. I am sure that it will not stand up.

B. 310. Cheek may stand the Racket but there will be no margin for safety. I do not like the instability of securing the cheek plate, the hopper on trolley is not a very stable thing to fasten it to. Pieces of ore get between tite of roll and the cheek plate and the cheek plate sometimes has to act as a crushing surface. You can imagine what strain it will be subjected to. Our chilled plates were always breaking on 36 inch rolls. They are breaking at Cement as well as wear.

B. 311. O. K.

B. 312. Shelf too light. The edge will wear rapidly. Where ore drops off shelf to chute below, it will wear about 1/8 of an inch per day, nothing but the deepest chilled iron wear plate, chilled deep will stand and this should be made easily renewable. Look out for

#5. W. S.

turning corners and dropping ore continuously on one spot, no one can realize its effect when enormous quantities are handled.

B. 313. See 312 B. Gate slides of this kind never work, ore gets in and sledge hammers will not budge them. They work on coal because you can crush that, as the space above the pushed in gate will fill up with ore, there will be about $3/4$ of a ton pressing on the gate and sometimes the gate must be moved quick. There is a wedging action of the ore on gate at the slot, due to pressure and pieces dig in plate and lock it, then comes the sledge hammer. Something like fig. 3 will have to be used; this is used at Cement Works on 3rd 36 Roll chute.

B. 314. Cant tell how this delivery will work without section at tail pulley of belt is sent; its a ticklish operation to deliver 400 tons an hour on a belt and requires a great amount of experience. This branch of the business should be fully detailed and submitted for criticism or it will cause a great amount of delay, trouble and expense.

B. 316. I do not approve of the hopper on the giants at all. It should be made of steel castings, like on the Giant at Cement Works, but twice as heavy. In my opinion the hopper shown would not last for one days crushing. At Edison we had hopper $2, 1/2$ inch steel castings and ribbed every 12 inches with ribs $2, 1/2$ thick and 6 deep. The thrust on the end plates of the hopper was taken on the side plates and not on the bolts but at Cement works the thrust of end plates are taken on the $1, 1/2$ inch bolts and they are constantly breaking. Your concussions will be 3 or 4 times what we had at Edison. Chilled plates would not stand at all and cant be used; ~~the~~ chilled plates are going to be put in, I cant see how you are going to take them out without taking the hopper to pieces. There is no bracings

#7. W. S.

to hold hopper latterly, except at foot, and against beams. You know we have four rods 5 inches diameter at Cement Works. You have'nt got the roller feed above giants right, a six foot chunk will give a trajectory landing it on top of the roll and end of hopper, which is very bad. I explained this once before to you. The mill at Edison was shut down 3 weeks and we lost about tenthousand dollars because we didnt have this right. If mistakes are made on giant, it will delay the starting of the mill for months and the cost would be enormous for general expenses, to say nothing as to the cost of any specific change. Your feed roll is too far in. There is so much wrong about these rolls that you better redesign the hopper and lay out, following the experience gained at Edison and Cement and send corrected drawing, and in this connection stick to old John Fritz's rule of "making lots of mistakes in getting everything too heavy". Remember static loads and concussive loads are fearfully and wonderfully different as I know to my sorrow. There is nothing on the drawings showing which roll is to have the slagger plates. They should be on roll farthest away from roller feed. Leave off the extension of the hopper above the top of the roller feed, then when ready to run, a shield only about 2,1/2 high and partly around can be put on, as its only to guard man cleaning skips and roller feed from being hit by stray rocks. At Cement our steel casting comes up level with the top of the roller feed. You have hopper extend over roller feed. How do you expect man to clean out skip and top of each skip, it couldn't be done and yet its absolutely necessary. If you want any drawings of rolls from Cement or Edison I will send them. See sketch of No. 4, showing trajectory which should be made for large chunks as the smaller stuff will take

#6 W. S.

care of itself. You do not send any details of bearings, Dump
tables, Roll drive, etc. It is needless to go into further criticism
of the giant roll arrangement. It would seem to me that you would
have saved a great deal of time and money if you had sent a general
sketch before making elaborate detail drawings.

B. 317. See previous notes.

B. 318. See previous notes.

B. 319. See previous notes.

B. 320. See previous notes.

A. 172. See note on B. 289. B. 292. B. 300.

A. 176. Would like details of girders that rolls set on. The plan
of bracing. These girders have been criticized before, as they are
shown without details my experience will not permit me to approve
them.

A. 160. I think your monoliths are all right for strength and that
as far as they are concerned we shall be all right. The pockets
shown in .019 are not shown in A. 160, why is this?

You should send general and detail drawings of Dryer and
connections as there may be changes in details that may turn out
troublesome.

We have not received any corrected blue print of the 1st,
2nd and 3rd 5 foot. rolls.

*Drawings copied on
Page 148, 149 & 150*

Registered
Acknowledged
Oct. 28/03

Letter No. 22.
 William Simpkin, Esq.,
 London, England.

Dear Sir:

The following is my notes on drawings sent by you.
 B. 330. Ballantine got Cement Co. blue print. The plates are about right but I may be that Dunderland ore will act different and you should have Ballantine set them right on a full sized experimental model, which I understand you have in London, so I will leave this drawing for you to approve; as to the details on drawing, the quarter inch plate is all right for stiffness, perhaps it would be well to cotter bolts, or when finally assembled put on washer nearly to head and Durr over, as they are in a position where they will receive no attention.

Note. Please show in future drawings, in details, if you intend a cotter or other way of locking, this will save me lots of writing, as I always spot every nut that can get loose.

B. 322. I suppose you have determined on your full sized model blowers, that eight blades are better than six, but if you have not, would it not be better to stick to six as we know this works and while there seems to be no reason why eight would not be better, I wouldn't change without I absolutely knew from experiment that it was better. I have been caught too many times on these self evident propositions to make changes. The increase in diameter from 5 to

#2 W. S.

6 ft. I suppose you have tried. I approve of these changes providing you have tried the experiment on full sized model and found them all right with the ore itself. I note that in your letter of May 2nd, No. 22, you state you will make the shaft three and fifteen sixteenths diameter as I requested, whereas in B. 322, it is only two and fifteen sixteenths. In view of our troubles with shaft at Cement, I can not approve of making the shaft any lighter than three and fifteen sixteenths in diameter and its none too large at that. I want to call your attention particularly to the fact that the fans should be balanced on the shaft. Ours at the Cement were not, hence our shafts are bent and bearings are cutting; the whole thing a source of infinite trouble and expense.

A. 179. Would like assembled drawing of blower with baffle plates, roller feed and everything complete, then I can make a more intelligent criticism, its a little blind now with drawings sent. Increasing the casing sheet from $1/16$ th to one eighth is an improvement. The spiral casing for fan wheel dont look to me as if it was just right, I mean the sweep.

Would like a blue print of the bearings you intend using on fan shafts and how you are going to insure alignment of so long a shaft on such a structure as you will have. What is the wooden door for in the lower left hand corner. Where is the lattice openings in bottom with spout to let dust accumulating in fan bottom down into main chute. I suppose you intend doing away with the return air flues from top of dust bins, using free air from mill, getting rid of the air blown in by some means unknown to me, if this is correct I do not approve of it. I know that it will not be a success and you and the company must assume all responsibility for any change made from the plan at the Cement Works. As far as I can

#3 W. S.

understand the general plan of the blower building you intend exhausting from all the chambers by a long duct, if you put an exhauster at one end or even at both ends, suction necessary to draw the air out of the chambers will have to be so great that the first second and third chambers will have a draught strong enough to suck the ore over. I am sorry you have departed from an actual successful working blower house and go in for changes on the most ticklish operation in the plant, perhaps I am wrong in my deductions, but the plans submitted are not clear, so I can't tell ^{properly} what is intended.

A. 178. See 179.

Should you and the company decide to go into the change in the blower house methods, you better insure yourself against a failure by so designing the layout that in case it did fail you could put in the return flues which in my opinion you will have to do.

B. 217 B. K.

B. 218 O. K.

B. 219 O. K.

B. 220 O. K.

B. 221 O. K.

B. 222 O. K.

B. 223 O. K.

B. 224 O. K., except, don't understand bottom "H" shaft, what is this shaft for and why so small a diameter compared with the others. Want blue prints of all idler bearings. Also side idlers.

Note. The side idlers at Cement are all being changed as the L. rubber catches top and bottom, see sketch No. 1, attached herewith.

B. 225. I note tall pulley shaft does not have any thrust collars

#4 W. S.

in bearings. How do you take lateral movements?

Note. Want blue prints of all bearings.

B. 226. Note same as B. 225 on first three shafts. The three other shafts have thrust in bearings.

B. 235. O. K.

B. 240. Have no arrangement of inside of this house, so can not tell anything about it.

How do you take lateral movements?

*Copy of drawing on
Page 151*

Registered

Oct. 12, 1903.

S. H. Pollen, Esq.,
Sec. Dunderland Iron Ore Co.,
London, England.

Dear Sir:

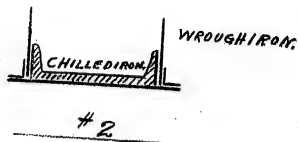
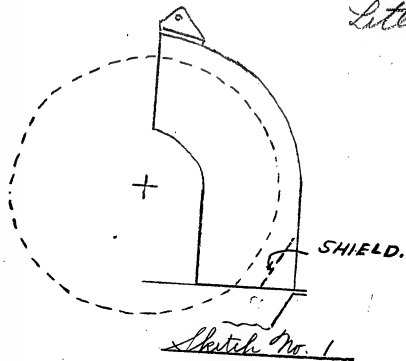
Your letter of Sept. 29th, 1903 received. So far all drawings sent by Mr. Simpkin for approval during the past year have been promptly gone over and examined and results communicated to your company. The first letter sent you was dated May 11, 1903 and the second letter May 18th, 1903. One set of blue prints relating to Giant Roll has been mislaid.

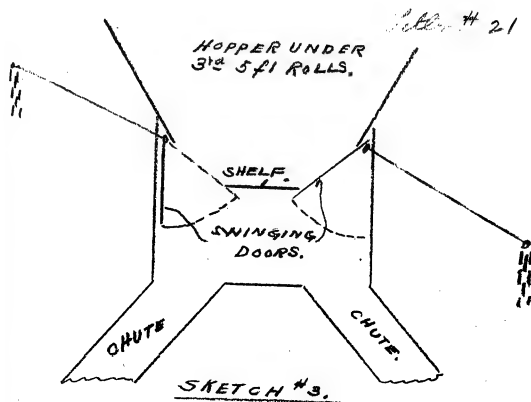
The lot of drawings here, which were received in Sept. from Mr. Simpkin are being studied by me. A part of the drawings have been studied and I forward a copy for record with your company at the same time as I forward the letter to Mr. Simpkin. If you will go over the letters you will see that only a few things have been finally approved and what will be finally approved will be sent your company for record and will be entirely based on the results of actual experience without any theory, and you can depend upon a prompt action on my part on receipt of drawings. It is to Mr. Simpkin that you must look for changes that I can finally approve.

Yours truly,

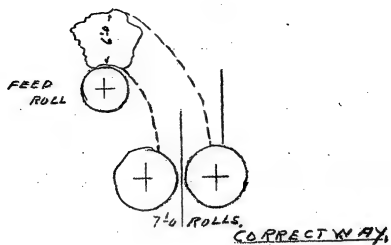
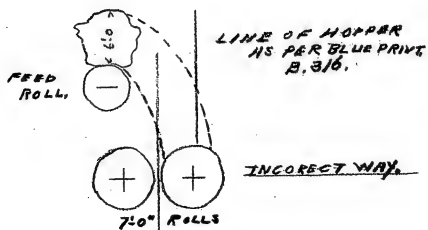
*Copy of letter
21 & 22 with
Sketches enclosed*

Letter # 21



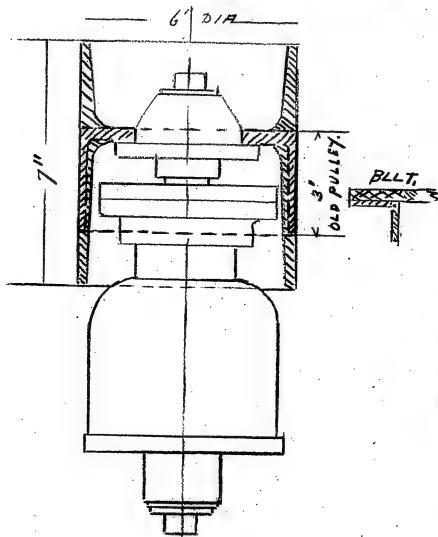


Letter # 21



SKETCH # 4.

Letter # 22

SKETCH #1CHANGE IN LENGTH OF SIDE IDLERPULLEY.

Registered
Acknowledged
Nov. 24, 1903

Letter No. 23.

Nov. 11, 1903.

William Simpkin, Esq.,
London, England.

Dear Sir:

O66. I do not believe in using two motors and two sets gearing for your heavy conveyors. One large motor with 25% more power than you will ever need with very liberal width of gearing is what I advise from the experience we have so far. You can use a slow speed motor, say 450 R. P. M. Advise 24 inch ^{on} gear/head pulley and 14 to 16 inch for second. You will make no mistake if you use very heavy shafts. Flexibles are absolutely necessary with bearings on each side of pinion. Our flexible works perfect. You spoke about a flexible which catches and drives without slack. We find this a disadvantage by the slack we have; when we are shut down we can turn motor 1/2 revolution, fix brushes, clean commutator and feel for bind. On our starting up system the motor starts slowly. Our gunny chamber of 109, with 50 H. P. 18 x 12 is just right and temperature is kept within ²⁰ degrees of outside. We were compelled to use three thicknesses of gunny for inner walls and one for outside to keep leaks down. With no dust of float we now have no trouble with brush sparking or glazing of fused dust. We have five inspectors, each man has a certain number of motors which he visits four times daily. He inspects for oil leaks, dust leaks, rubs the surface of commutator a little with crocus cloth, sees brushes O. K., nuts all tight and notes the temperature of thermometer.

#2 W. S.

The result is our motor system is as near perfection as anything can be and we have no trouble except where there is jar. Now I want to impress upon your mind the serious character of sharp jars and shaking on motors. Where we have jars on motors we can not keep the brushes from sparking as the jar is transmitted to them; the result is constant roughening of commutator and increase of spark and change of brushes. Even the motors driving rolls should have flexibles. I spoke to you about this once before.

The big 1,1/4 inch wire rope flexible used as wobbler on 3rd 36 Rolls is all right. You can make them to drive any amount of power. If you use outside air and draw it in by fan, and force out through gunny, look out that the air outside will not be very dusty on certain direction of the wind. Cement works got knocked out in two or three places where they did this and had to go back to the old way. Look out and have a very large shaft and ample hearings, as well as many spiders on the big idler that serves to increase arc of contact of head pulley on conveyors. We have had serious trouble here until we made them strong.

F. 246. Your upright side idler should be one inch longer to meet every contingency. I am going over balance of drawings sent and will finish shortly.

Yours truly,

W. S. Brown

Registered
Acknowledged
Nov. 24/03

Letter No. 24.

Nov. 16, 1903.

William Simpkin, Esq.,
 London, England.

Dear Sir:

Your No. 37 received. You must have misunderstood me regarding the hoppers for the Giant roll and when I suggested the use of sheet steel for hoppers of rolls in place of cast steel, it only applied to the finer crushing rolls. As hoppers on Giant and Intermediate Rolls were reconstructed three times, each one stronger than the other at a cost to me for works, delays, etc. of over \$30,000, the requirements as to strength would not likely slip my memory: I refer to hoppers above top of rolls and sides. As to the hopper below Giants for storage, that can be made of sheet steel and we agreed on that in Florida, but the bottom I told you would have to be strong. You will not be able to depend upon the men keeping ore in the bottom to cushion below, no matter how intelligent they are. Any mill constructed which has to depend upon the intelligence of the men will be a big failure. Fix things so if neglect comes nothing is ruined.

I will send you this week sketch of Giant Hopper at Edison and rough sketch of my idea of hopper for your giant. I refer to top and sides and also storage hopper, feed rolls, etc.

If you get no reply from a drawing do not take it for granted that it is all right. You say that upper part of hopper of

#2 W. S.

Giant at Stewartville is of wood, this is a mistake its of steel; the Giant at Edison has wood and its no good, build of steel.

Speed of feed roll above Giants has very little to do with the trajectory of large pieces. Your experiment with small feed roll must have been done badly. A circle acts somewhat like an angle chute, from the time it starts to slide it moves down a circle and can not possibly fall any where near perpendicular; if it was wood and didn't slip it might, but if of iron and it slid, then it forms a large trajectory. You remark that, "however, you wish it and so it will be moved back." Its not a question of my wishing it, its a question of getting it right and my data is based on actual working.

C. 136. Dirt will get in between door and hopper on plan you show. The sketch we sent is best thing we have found. This sketch No. 1, Letter 21.

C. 137. I am sure first 5 ft. rolls should have cast steel for hopper. I think Manganese steel wear plates are good, providing they will give more wear for the money. I await sketch of gate slide. We have used every conceivable one and not one worked permanently.

Will send you chute sketches this week, bottom Dryer and last two rolls.

B. 316. I never remember suggesting chilled plates in upper hopper of Giants. You must have misunderstood me. We never had them at Edison or Cement and there is no need of them, as wear on cheek plates only commences when you get to finer rolls.

Please take my notes in the spirit they are intended. I am only sending you criticism based on experience in actual work, with such conservative changes that will tend to eliminate defects now met daily. If you could spend one month at Cement works, you

W. S. #3.

would'nt need any of my letters. Our ropes last on Rolls from 26 hours to 240 hours, depending on state of the plates and evenness of feed; this is on crushing Cement 90% through 200 mesh, with less pressure for coarser crushing life will be longer. When roll plates chip off, load varies pressure and its severe on ropes.

B. 246. We never had this drawing before, see last letter in re making inch longer.

All drawings or parts approved by me finally are marked and with proper explanations, are finally filed with the Dunderland Iron Ore Co. and I will only be responsible for those things finally approved and filed with the Company, of which there has been two parcels already sent.

Yours truly,

Letter No. 28.

JAN. 18, 1904.

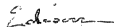
William Stephen, Esq.,
London, W. C.,
England.

Dear Sir:

Replying to yours of the 31st ult., I beg to state that I go to Florida about the 25th of February, but will be busy from now on. You time your visits at a time when I am overwhelmed with work.

I do not understand your reference to fine grinding rolls, as you leave out all explanations. You will be interested to know that one of our 12 inch iron shafts on fine grinder snapped in two parts. We use removable plate and put on a new rope in 40 minutes, so do not understand your remark about not being able to do it.

Yours truly,



April 25, 1904.

William White, Esq.,
75 Wallace St.,
Orange, N. J.

Dear Sir:

I beg to enclose you herewith letter of introduction to
Mr. Peter Weber of the Edison Phonograph Works.

Yours truly,

April 25, 1904.

Peter Weber, Esq.,
Orange, N. J.

Dear Sir:

This will introduce to you Mr. William White who was em-
ployed here in the office by me some time ago. He is desirous of
obtaining a position in the Phonograph Works Shop and anything you
can do for him will be very much appreciated, by,

Yours truly,

H. B. Dick, Esq.,
Letter to
1

Dear Sir:
I
s/o. 874
forwarded to
101

Dear Sir:

I
late to make
complete draw
are making th
etc. which wa
101

Dunbarland in
Titanian
Lon

Dear Sir:

I

forwarded to

April 25, 1904.

H. E. Dick, Esq.,
c/o Brown, Shipley & Co.
125 Pall Mall, London.

Dear Sir:

I beg to enclose you herewith copy of a letter which I
forwarded to Mr. Simpkin this day.

Yours truly,

Thos A Edison

April 25, 1904

Dundee Land Iron Ore Co.,
Fitzroian House, Arundel St.,
London, W. C., England.

Dear Sirs:

I beg to enclose you herewith copy of a letter which I
forwarded to Mr. Simpkin this day.

Yours truly,

Thos A Edison

Letter No. 29.

April 25, 1904.

William Simpkin, Esq.,

c/o Standard Construction Corporation, Ltd.,
London, England.

Dear Sir:

I do not understand your letter in which you fear it is too late to make changes in the 3 high Rolls. I have never approved the complete drawings of the Rolls, and your letter would imply that you are making them. How about the other drawings of Dryer, Conveyors, etc. which was to be sent for final approval?

Yours,

Thomas Edison

X

June 8, 1904.

Dunderland Iron Ore Co.,

Fitzalan House, Arundel St.,

London, W. C., England.

Dear Sirs:

For the purpose of record I wish to state that I have never received final drawings of the three high fine crushing rolls and the major portion of the plant to be erected in Norway and the statement in the prospectus that I am to design the plant has not been carried out.

Yours truly,

Thos. A. Edison

Registered

R. E. Dick, Esq.,

June 18, 1904.

c/o Brown, Shipley & Co.,
London, W., England.

Dear Sir:

As per request of Mr. Edison, I beg to enclose you herewith
a copy of a letter sent to the Dunderland Iron Ore Co. June 8, 1904.
Kindly acknowledge receipt of same, and greatly oblige,

Yours truly,

S. H. Underhill
*Secretary**Registered*

Sir David Dale,

June 18, 1904.

c/o Edison Ore Milling Syndicate, Ltd.,
London, W. C., England.

Dear Sir:

As per request of Mr. Edison, I beg to enclose you herewith
a copy of a letter sent to the Dunderland Iron Ore Co., June 8, 1904.
Kindly acknowledge receipt of same, and greatly oblige,

Yours truly,

S. H. Underhill
Secretary

Registered

June 18, 1904.

Dunfermline Iron Co. Ltd.,

London, W. C.,

England.

Dear Sirs:

I beg to enclose you herewith a copy of a letter which was sent you on June 8, 1904 and which I omitted to have registered at the time the original was forwarded.

Yours truly,

A. Munro, Esq.
 Secretary

Registered
Acknowledged
Aug. 10/04

July 28, 1904.

Mr. S. H. Pollen, Sec.,
Dunderland Iron Ore Co.,
London, W. C., England.

Dear Sir:

Replying to yours of the 19th inst., I beg to state that it would be useless to go to any trouble or expense from now on to send me drawings of machinery already contracted for. I suppose everything is closed up and I hope you will have a happy ending.

Yours truly,

Thos A. Edison

Copy.

Oct.19, 1906

William Simpkin, Esq.,
London, England.

Dear Sir:--

You will notice on new rolls that we have provision for Bath oiling- so far we have not made it go very well on account of leaking of oil. It saves a great amount of oil; however, we do not use the overflow pipe close up to shaft, but supply all the oil the bearing will take and let it drain away from casing. You will notice the new stuffing box. This principle has proved a great success. The old way the wood sagged away from shaft in the packing case and let dust in; with the new way this can't occur since the dust must filter through the wood which it can't do; the result is that on all bearings with this packing, we never have trouble with dust.

We also made the mandrel a considerable distance from the bearing; this prevents showers of sand and also helps us in getting plates on.

We start the rolls, i.e. back roll, with rope and windless which works O.K.

W.S.--2--Oct. 19, 1906

Use our soft babbitt. We tried regular hard babbitt and had several pinches, because it wears down so slowly that it takes too long to get an oil bearing. When using the regular soft babbitt (of which you have the formula), we make the compression of springs one and one-quarter inches the first week; the next week we increase pressure to one and three-quarter inches; week following, two and one-quarter and week after, two and one-half, which is about the amount we regularly use.

We made great improvement in working of rolls by feeding with fine ore. This stopped jumping of rolls which was due to large pieces. So far the rolls have worked perfectly and give no trouble whatever. The power used ~~per barrel~~ is about double (per barrel) that of rope rolls, but output is greatly increased, because they never break down.

Yours truly,

Thos A Edison

Personal signature

November 19, 1906.

William Simpkin, Esq.,
Dunderland Iron Ore Co.,
Fitzalan House,
Arundel Street, Strand,
London, W. C. England.

Dear Sir:

Yours of Oct. 31st. received. If I remember right you have four rolls for fine crushing, which at 50 tons hourly, each 20 hours, would be 4000 tons daily. As you want more and do not want to load your belts up with returns, the only way to do it is to increase your pressure. The capacity goes up very much faster than the pressure; we carry 750 tons on our 36 belt, to and from the rolls. ~~4-7 3~~

The rope rolls would do about 16 to 18 tons hourly, 85 per cent through 200 mesh and about 65 tons 20/1000 diameter per hour.

If your present ore is anything like the 20 barrels of ore sent me you should crush 75 to 100 tons on your present roll. The only explanation I can make is that when you got into the ore it became very much harder.

We have one of our big rolls came as drawing sent you, run by a motor and belt, it runs all right. The best solution for you is to duplicate what work here so perfect, possibly driving with belt. We still run 200 revolutions per minute and carry all the pressure we can on the bearings; using all the oil the bearing will take and keeping thermometer in oil to note its temperature.

W. S. 2.

We pass 200 tons of ~~clinker~~ ^{slag} ~~hourly~~ through the rolls. The efficiency is only a question of ~~pressure~~ ^{work of bearing}. Your changed roll will not have enough bearing surface to give you what you want, that's my opinion. Are you crushing 4000 tons daily?

Yours truly,

Thos A Edison

William Simpkin, Esq.,
Fitzalan House, Arundel St.,
London, W. C., England.

Dear Sir:

If you are having trouble about making enough fines, you should change the corrugations on plates to correspond to cement plates. The old rolls carried 200 tons per hour all right and the corrugations were O. K. for the finest crushing. The new rolls sent you show them.

The corrugations you have were adapted to the ore sent from Norway and was probably top ore and not hard, like what you say you now have.

Minimum corrugation give finest crushing,

Yours truly,



February 27, 1907.

William Simpkin, Esq.,
Dunderland Iron Ore Co.,
Fitzalan House, Arundel St.,
London W.C. England.

Dear Sir:

In reply to your letter of the 30th. ult., I beg to state that Mr. Edison has gone to Florida and will not return until about the 15th. of April, when your letter will be placed before him for his attention.

Yours truly,

Secretary.

Dec. 14, 1907.

Wm. Simpkin, Esq.,
 Edison Ore Milling Syndicate Ltd.,
 Fitzalan House, Arundel Street,
 London, W. C. England.

Dear Sir:

In reply to your letter of the 28th. ult., I beg to state that the United States Steel Corporation and others have big slag Cement Mills in this country. They are troubled with variable slags and sulphur. Our costs at works are lower than any other mill in this country.

Flour in cement is worse than useless; it is hydrated in the act of mixing. What is wanted is a cement where all is fine and a minimum flour, and not cement with a large amount of coarse, which takes a year to hydrate, and swell the already set concrete and a lot of unpalpable flour, that sets while you are mixing it.

There has never been a single instance, where our concrete has shown a single failure; which is not the case with the other companies.

Yours truly,

Edison

*We have supplied all the cement for Manhattan
 now have contracts for New Subway*

E

Jan. 29, 1908.

Wm. Simpkin, Esq.,
Fitzalan House,
Arundel Street,
London, w.c. England.

Dear Sir:

In reply to your letter of the 17th inst., I beg to state that your trouble is want of aeration. We have no trouble here. Our cement tests higher than any other. The flour is a disadvantage, as it forms a colloid right away, and weakens the cement.

Eighty five per cent through 200 with a minimum flour and well aerated, makes the strongest cement possible.

Yours truly,

**Edison Ore Milling Syndicate, Ltd., and Related Companies
Experiments (1899-1900), Cat. 999**

This book covers the period November 1899-May 1900. It contains notes, drawings, calculations, and test reports relating primarily to experiments conducted by James B. Ballantine on ores. Most of the entries are in the hand of an unidentified author, but there is one page of notes and calculations by Edison pertaining to sight-feed experiments. Another note regarding the price and consumption of soda for briquettes bears the initials "T.A.E." Also included is a report entitled "Report of Cement Arch Test No. 3," along with notes concerning a "hematite machine" for Dunderland ore. Portions of the book are transcriptions of notes contained in N-99-11-29 (see "Notebooks by Edison" in the Notebook Series). The spine is stamped "Record" and is labeled "Experiments." The book contains 401 numbered pages; many pages are blank.

Experiment on Norway Ore by Ballantine

Nov 27 99 Sample A contains 52.66 % of Fe (Shock)

Quenched to air total weight 650 grains blown out by air 2 1/4 % as dust. The 650 grains was had following percentage after running

Magnetite	0
Hematite	46%
Tailings	51%
Dust	2 1/4%

The above sample separates easily, there being no pieces of quartz with Magnetite sticking to it. Made assay for P. myself. got .015 sent sample to Mr. Smith to assay for Fe & P. - He reports 66.3 Fe .015 Run over 7 times - 6 times to make fines & once run concentrate

Sample B. After runnings

Quenched to air		Dust
Magnetite	9%	
Hematite	42%	
Tailings	37 1/2%	
Dust	"	
Magnetite	3 1/2%	

This sample was now to separate than A. Had to run it over Machine (A) twelve times (B) six times to make concentrate. Then rerun concentrate (3) three times to get magnetite with 6-10 x 15 lumps (for vol. & Comp Record) 3 times to get stuff a little less Magnetite than Hematite. This was done with 1st lumps.

In this run the deflected stream had a partition board put in to cut the stream of Magnetite stuff. The last Magnetite was

low grade Magnetite. This was shown out Sample C. 33.95 Fe (Shock) Cannot separate on Hematite Machine. Contains about 30% Magnetite

It is nearly all Magnetite.
Sample D. 30.55 Fe (Shock) Contains 30.4 Fe in Magnetite Only separable on Belt "C"

Continued

Sample E. 26% Fe (Shock) 25% Fe in Magnetite (Ballantine) only separable on Belt "C"

Sample F. 17% Fe in Magnetite. Lied this sample on Hematite machine but did not get any good product owing to magnetite. This is one of the bad samples & in practice I do not think it would pay to separate the Hematite owing to the Magnetite Magnetite. Look out for trouble here

Sample G. 44.60 % Fe (Shock) 43.11 % Fe in Magnetite

No Hematite the Magnetite
Sample H. 41.94 % Fe (Shock) I (Ballantine) got 36.2 Fe in Magnetite Very little Hematite. A. Magnetite

Sample I. 34.22 Fe (Shock) 20.2% of this iron is in Magnetite. Cannot separate Hematite this would make a loss of 12% in tailings. This sample may have been taken from the surface and is weathered out (it looks that way) The forgings are from Mineral Deposit

The Untraced deposits would give an average of 8% Fe in Magnetite Tailings 27% Fe in Magnetite could be got with bar magnet. The 8% in Hematite could not be got owing to Magnetite Magnetite

Sample K. 35.52 % Fe (Shock) This is one of the fine samples for Hematite Machine as it only contained 1% Magnetite. Can make a splendid separation in 7 runs by making a good concentrate each time, cannot see any quartz in concentrate under microscope. Quenched to air. Contains 14.4 Fe in Magnetite. Shock reports 32.39 % Fe total. One of the bad samples but seems to work pretty good. Could work it in practice OK

Sample M. 34.52 Fe (Shock) contains 11.3% Fe in Magnetite. This and the last two samples are from the Untraced Deposit and are OK for the Hematite Machine

Can be separated with 8 magnets running at the rate of 600 lbs. per hour for powder machine. This is done by blowing all of the stuff smaller than about .003 out by air. This contains very little iron - 6 runs make good tailings & concentrate. Run the concentrate over to get stuff that is more magnetite than Hematite & once to get stuff that is less magnetite. Will have to blow dust out in

Experiments on Norway Ore. "Continued"

Norway mill to get machine to work well
 Sample N. Contains 18.3% Fe in Magnetite & so no good for
 Neumatite Machine

Sample O. Use all O.V. for Neumatite Machine and can be separated

" O. Just rich with not more than (9) nine magnets at most

" R. In fact 8 runs to be all that is required. 6 runs to

" S. make concentrate with 5.5 volt & 1 amp. - and twice

" T. to take magnetites - one run with 20 lamps/ 67 volts

" U. 3.3 amp. to catch stuff that is a little less Magnetite

" X. Use Neumatite & over with 4.5 lamps/ 5.5 volt & 1 amp.

Sample V. To catch stuff that is a little more Magnetite than Neumatite
 Use from another deposit & are difficult to separate
 X. V. Contains 38.4% Fe in Fe 17.2% of it being in
 Magnetite - Z contains 39.3 in Fe 15.8% of it being
 in Magnetite.

Now mixed up all of the samples in bags crushed and
 returned to ore going to make Magnetite & Neumatite together
 to send to London. - Took out Magnetite on belt machines in
 7 runs. I find that I have an enormous amount of
 magnetites from the samples that contain about half
 magnetite & half Neumatite. Will have difficulty in making
 a good concentrate I am afraid. Both object of catching
 strongly Magnetite Magnetites & got rid of, as they else
 the Neumatite Machine. They are not magnetic enough
 for belt machine & to magnetite for belt machine.

1st run was made with 5 lamps on board 4.4 7 volts 2.7 amp.

Plus runs to catch all the Magnetites or half grade
 stuff between Magnetite & Neumatite. Used deflecting
 board to cut stream.

Next made 7 runs with 40 lamps 5.4 volts 3.88 amp

This makes good tailings. - Now the concentrate 3 times

with 40 lamps 5.4 volts 3.88 amp. The concentrate now

looks good. - Made assay for O. myself (short method)

got 63.4. - The Magnetite should go about 67% Fe

60 Hints & the Neumatite in the fragments between 65

& 66% Fe - Now find that Neumatite fragments
 only must 63.94% Fe & 0.5% in London.

"Continued"

Now mixed & crushed up all of samples sent in rock form
 from Sunderland. Crushed to 0.09 - Took out Magnetite in

(7) seven runs on belt machine (#1 small bottle is a sample)

Took out most Magnetites on Neumatite Machine with

10 lamps (Sample bottle #2)

Made seven runs with 40 lamps 5.4 volts 3.88 amp.

1st Run took out 5.6%

2d " " " 5%

3d " " " 4.3%

4th " " " 3.9%

5th " " " 3%

6th " " " 2.2%

7th " " " 1%

Total 25%

This concentrate is from three runs 4.5% Fe

#3 bottle is a sample #4 bottle is a sample of tailing
 made in the same run.

Now 4.5% concentrate 3 times 4.5 lamps 5.5 volts

4 amp. - Assays 59% Fe. Bottle #5 is sample of

concentrate & #6 is sample of tailings. - Made other

3 runs with 25 lamps on, to catch portion of magnetites

less Magnetite than Neumatite. Took out tailings in

bottle #7 concentrate in bottle #8. Reproduced

concentrate to 0.07 & ran twice - concentrate in big
 bottle is result.

1st Run with 15 lamps 6.1 volts 2.8 amp.

2d " " 20 " 6.76 " 3.3 " *

Franklinite Experiments (Ballantine)

March 15, 1900

A mixture of Franklinite and Garnet ore sent from Shantlin Smelter separated easily on Kewatite machine. The Franklinite is a good deal more magnetic than the Norway ore and a perfect separation was made in 6 runs at rate of 600 lbs. per hr.

1 st Run	was with 8 lamps on board	42.7 volts	2.2 Amps
2 ^d	" " " 15 " " "	61 " "	2.8 " "
3 ^d	" " " 20 " " "	67.6 " "	3.3 " "
4 th	" " " 30 " " "	78 " "	3.55 " "
5 th	" " " 40 " " "	84 " "	3.88 " "
6 th	" " " 45 " " "	85 " "	4 " "

There is good deal of difference in the magnetic strength of the Franklinite - Had I used enough power in the first run to deflect say the stuff I took out in the 5th run. Then the stuff that 10 or 15 lamps would deflect, would have blocked the magnet with 40 lamps, hence the reason for using a weak magnet first, getting stronger each run. The poles of magnet were $1\frac{1}{4}$ " apart at the end of above mentioned six runs. the poles of magnet now put $\frac{1}{2}$ " apart and the Garnet ore was taken out in the other six runs with 45 lamps 85 volts 4 Amp. The ore was crushed to .020 The Franklinite broke out of the Calcock chain & is easy to separate. the Garnet is more difficult to deflect being a great deal less magnetic than Franklinite.

Muck Experiment (Continued) Mar 3 & 1900
 Young to try & get another waterproofing agent other than
 Residuum. Will try Tar & Sludge but also try Na₂CO₃
 instead of Na₂HPO₄.

#1

100 Resid.
 100 Na₂O.
 30 Res.
 8 1/2 Na₂HPO₄.

Brickettes made from this muck stood 3 blows on wood
 float dropped 10 ft before baking. Baked 1 hour 12 min.
 at 450° stood 4 hours a brick left in stove another
 hour & heat raised to 700° stood 4 1/2 hours when cold
 Centre was black & showed no signs of burning.
 Another brick put in stove fire for our heat was quite
 hard when taken out was not cracked but brown in color
 and fairly strong. A brick put under water for 24 hours
 absorbed 6% somewhat soft & broke with one blow.

This brick I considered N. 2.

#2

100 Resid.
 100 Na₂O.
 30 Res.
 9 Na₂HPO₄.

7 blows before baking

3 " hot

19 " cold

Will not stand muck test for 24 hours Na₂CO₃ 6% water.

#3

100 Resid.
 100 Na₂O.
 30 Res.
 10 Na₂HPO₄.

7 Blows before baking

5 Blows hot

16 " cold

Stands water test same as #1 N. 2.

Muck Experiments "Continued"

#4

100 Potin
125 H_2O
30 Pot
8 1/2 Na H.O.

Brigette made from above muck stood one drop
before baking 5 blows hot 12 blows cold.
Shades water test same as #1 N.Y.

#5

100 Potin
125 H_2O
30 Pot
9 Na H.O.

Brigette made from above muck stood 1 drop before
baking - 6 blows hot 17 blows cold.
Shades water test same as #1 N.Y.

#6

100 Potin
125 H_2O
30 Pot
10 Na H.O.

1 Drop before baking 4 blows hot - 7 blows cold.
Will not stand water test at home - N.Y.

#7

100 Potin
125 Water
25 Pot
8 1/2 Na H.O.

1 Drop before baking 6 blows hot 12 blows cold.
Water test same as #1

#8

100 Potin
125 H_2O
35 Pot
8 1/2 Na H.O.

1 Drop before baking 6 blows hot 15 blows cold.
Water test same as #1 N.Y.

#9

100 Potin
100 H_2O
30 Pot
10 Na, Ca O₃

2 drops before baking 1 blow hot 25 blows cold

Muck Experiments "Continued"

#9

After lying under water 24 hours absorbed 5% (seems to
be hard compared w/ other bricks) exposed to frost 10" above
ground thawed suddenly in chemical room 78° temp. stood 3
blows afterward - Work then hot otherwise a good brick

#10

100 Potin
100 H_2O
30 Pot
12 Na, Ca O₃

6 Drops before baking 2 blows hot 16 blows cold.
Water freezing and thawing tests same as #9 2 blows
afterward.

#11

100 Potin
100 H_2O
30 Pot
14 Na, Ca O₃

5 Drops before baking 3 blows hot 3 blows cold.
Water freezing & thawing tests same as #9 - 3 blows afterward

#12

100 Potin
125 H_2O
30 Pot
10 Na, Ca O₃

1 Drop before baking 2 blows hot - 5 blows cold.
Water freezing & thawing tests same as #9 - 3 blows afterward

#13

100 Potin
125 H_2O
30 Pot
12 Na, Ca O₃

Absorbed 1.9% water in 24 hours after being exposed to frost
& thawed same as other bricks - stood 5 blows afterward
stood 5 drops before baking 3 blows hot 16 blows cold.
This is the best brick so far.

#14

100 Potin
125 H_2O
30 Pot
14 Na, Ca O₃

8 Drops before baking 2 blows hot 22 blows cold -
Water freezing & thawing tests same as #13 stood 5 blows
forward.

Mack Experiments 'Continued.'

#14 Afterward - This truck is weak when hot but seems to be
good otherwise —

#15 100 Pneu
12.5 N₂O
2.5 Pres.
14 Ka Co. O₂

5 Drops before baking 3 blows hot 47 blows cold.

Water purges & thawing tests same as #13

Stood 10 min blows afterwards

#16 100 Pneu
12.5 N₂O
3.5 Pres.
14 Ka Co. O₂

2 Drops before baking 5 blows hot 81 blows cold.
Under water at 1000 absorbed 1.3% after being
exposed to frost & thawed same as other trucks stood
15 hours. This is OK but truck I have now made

#17 100 Pneu
12.5 N₂O
3.5 Pres.
16 Ka Co. O₂

Breaks N₂O too much water.

#18 Same as #16 only two more inches of Pres.
Grates are fair. Could be used as far as strength as
conserved 3 blows hot - Much would be
N₂O in Plastic - Too change into Pitch in making up.
& makes Much too thick. Might block up pipes & give
no red of trouble. Cannot get more than 1.85 part
N₂O to mix with smoke. This makes the smoke too
thick - if say 200 parts would mix this might be OK

'Continued'

Have tried different samples of tar - all act same. N₂O

Good sludge from Baltimore. N₂O worse than tar

24. Baum's Medium sent from Standard Oil Co. OK using
34 parts instead of 35 as formerly

Have put some of #16 Trucks in boiler first before baking will
stand to be melted with breaking but will not stand water
test before baking

Have also tried to bake in 45 min. - Set a 3 blow truck in
45 minutes at 500° F. 4 blows at 550°

Sight Feed Experiments

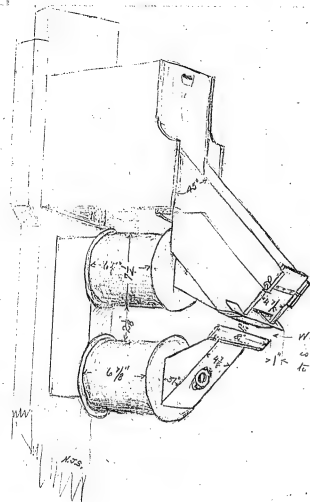
Number of Drops per Min.	Amount oil in gallon per hour
30	0.11107
61	0.18579
89.1	0.2791
116	0.3687
143.9	0.4698
179.5	0.6121
233.7	0.8352
370	1.4529
623	2.6137
Highest obtained Number of Drops:	668 2.8804
Smallest stream on increasing flow	26.419
Smallest stream on decreasing flow	1.8209
For open valve at a height of oil over point of pipe. 12 3/4"	.526



The above experiments were made with the sight feed glass used at Ogden Mills - Can used was a 3 gallon can. Mill oil was used. Temperature about 70 deg Fahr.

(corresponding to 25.5% of ideal rate)

Magnetite Machine (Ballantine) Apr 6th 1900



WOOD NOT SHOWN IN DRAWING
is fitted in between poles
to prevent concentration, getting
back.

The above is a sketch of Magnetite Machine - a bar $1\frac{3}{4}$ " wide by 8" long by $\frac{1}{16}$ " thick was used for lower pole of Magnet. This bar had its edge beveled so as to form a sharp edge for arcs. A bar 8" long $1\frac{1}{2}$ " wide & $\frac{1}{16}$ " thick was used for top pole. The ore after coming down at 45° chute was deflected back by another board at 45° . This board allowed ore to fall on bar forming top pole of magnet about $\frac{1}{2}$ " from edge. The bars were loose & could be adjusted to any desired width of opening. Best results were obtained when they were $1\frac{1}{8}$ " apart with a piece of wood filling the space between them. Magnetism held them in place when current was on. The object of using long bars for poles of Magnet was to prevent misfire - The edge of lower pole

Magnetite Machine "Continued"

is $1\frac{1}{8}$ " back from edge of top pole. $2\frac{1}{8}$ " when poles are $1\frac{1}{8}$ " apart. This distance allowed a small misfire to form on both edges not enough to arc.

The feed used was $4\frac{1}{8}$ " wide & fed at rate of 600 lbs per hour of Sunderland Ore. A piece of wood with sharp edge was used for parting board.

Portland Cement
Test on Screw Conveyor Jan'y 24 1900

Remarks

Tests were made with various gals. of pumps & speeds -
 Parts of uniformity partially due to dampness of cement.
 Much produced at given feedings regularly -
 The power reading was taken when the latter end of each
 test when pump had become steady.
 Motor with belt off taken off HP

HP to run screw 16 R.P.M. = $140 - 84 = 56$ }
 " " " 70 " " = $133 - 84 = 49$ }

Logan by test fair load on screw.
 270.

Phillips

1	2	3	4	5	6	7	8	9	10	
No.	R.	Lbs	Lbs	Elect	Elect	Torque	$\frac{1}{3}$	$\frac{4}{6}$	$\frac{4}{5}$	
of	P	per	per	HP-84	HP-144	lb ft/min	-	-	-	
Run	M.	Rev.	Min.	-	-	-	-	-	-	
1	17	27	470	.68	.12	74	2.8	3920	691	
2	15	46	685	.68	.12	84	1.8	5710	1010	
3	15	43	650	.57	.01	7		65000	1140	
4	16	45	720	.67	.11	72	1.6	6550	1070	
5	16	52	833	.67	.11	72	1.4	7570	1240	
6										
7	14	107	1474	.77	.21	157	1.5	7020	1910	
8	48	56	2700	1.35	.79	173	3.1	3420	2000	
9	48	42	2000	1.83	1.27	278	6.6	1570	1090	
10	56	45	2550	1.83	1.27	238	5.3	2010	1390	
11	67	30	1800	1.16	.60	94	3.1	3000	1550	
12	72	50	3600	2.39	1.83	267	5.3	1970	1510	
13	56	85	5000	2.68	2.12	400	4.5	2360	1870	
14	40	41	1938	1.09	.53	140	3.4	3660	1780	

Report of Crescent Arch Test

No. 3

Arch material mixed and put in place on afternoon of Oct. 12th 1899.

Arch tested on Oct. 23rd x 24th

Sawed Arch material allowed to set 11 days

Arch made in proportions of 1 of neat cement 2 of sand to 3 of sharp broken stone.

Two round steel bars 3/4" effective diameter with spaced ends 1" in diameter were used.

Weight equals 1473 lbs per ft. area of 3/4" section 44179 sq. inches

Two 1 ft lengths of 9" channel iron 1325 lbs per foot were used as weather plates for the bolts - Note men set up with 18" wrench and force of 100 lbs, causing initial tension in the bolt of 5000 lbs.

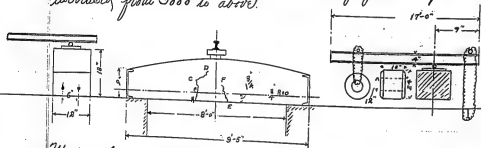
Arch span 8 ft. Over all dimensions 9 ft 5 inches.

Arch built new fresh Atlas Portland.

Arch 12" x 18" at greatest cross section, 9" x 12" at least.

Top of arch curve to radius of 14' 3".

Load of 31400 lbs concentrated at center of span was applied without breaking beam, loads being gradually increased from 5000 to above.



Material and weight of same used.

2 tie rods at 1.473	14 lbs
2 foot chains at 43	86 lbs
2 channel iron weather at 1325	27.1 lbs
1 2" roller at 15	15 lbs

Continued

over 2" roller at pressure point 13 lbs	13 lbs
over 1 1/2" gas pipe at load point at 7 1/2	7 1/2 lbs
over machine steel pressure plate 6 3/4" x 7 1/4" x 3/4"	17 lbs
over weight supporting chain at 11 1/2	11 1/2 lbs
over smooth cylinder roll (cast iron)	1325 lbs
over iron rail used as lever 17 ft long,	273 lbs

Load caused by weight of rail above.

$$W(X+X') = S \cdot \frac{X^2}{2} \cdot \frac{260.2}{12.9}$$

$$S(X+X') = S \cdot \frac{X^2}{2} \cdot \frac{260.2}{12.9}$$

$$S = 13.$$

$$S + S' = S \cdot \frac{260.2(96+9)}{9} = 30.55 = S$$

$$X = 96"$$

$$X_1 = 4.5"$$

$$X_2 = 9"$$

$$X_3 = 192"$$

$$\frac{12.9(192+4.5) = 13 \cdot S_2}{192}$$

$$3069. S$$

Constant No. 1 - 3068

Dead load weight of flat plate - 17

" " roller No. 1 - 13

" " " roller No. 2 - 15

" " chain - 86

Total 131 lbs = Constant # 2.

Live load at time of stopping test.

Total load acting

roller = 7.5

chain = 11.5

Wt of rail 1325

Total 1344 lbs

$$W(X+X') = S \cdot \frac{X^2}{2} \cdot \frac{1344(15 \times 12 + 9)}{9} = 25224$$

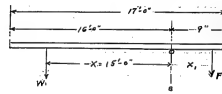
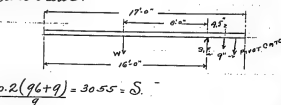
$$S = 25224$$

$$S = 25224$$

$$S = 25224$$

$$S = 25224$$

$$S = 25224$$



Loads applied at intervals of 6" from 2' 6" to 16", at which the test was stopped.

Deflection taken from a wire stretched across arch.

Report of Cement Arch test "Continued"

Under load of 9000 lbs, the deflection was 1-16"

18000	1, 1/4
24000	1-2
31400	3, 1/4

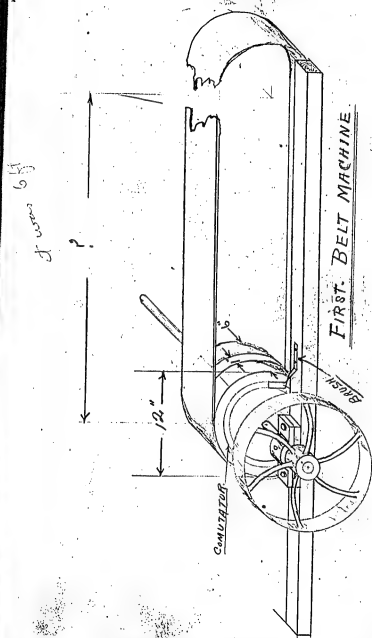
On removing load there was a permanent deflection of less than 1-16"

All cracks closed up under all loads under 22000, so that you could hardly find them.

Cracks appeared as per sketch:-

A. to B. at load of 3000, increased to C. by increasing load to 18000, to D. by increase to 24000, beyond which no perceptible increase was found.

Crack E. to F. appeared at a load between 18 and 20000. There were no cracks at supports.



Soda

The price of soda at B. Syracuse is 50¢ per 100 lbs 45¢ - We buy 55% which is practically pure carbonate. Soda & we pay on the basis of 45% which brings it to about \$1.13 per 100 lbs - We use about 2.8 lbs of 55% Soda for ton of briquettes \$4.50 S.E.

**Edison Ore Milling Syndicate, Ltd., and Related Companies
Cost Estimates (1901, 1907)**

This book cover the periods November-December 1901 and February 1907. It was used by draftsman William Simpkin and unidentified authors. Most of the book consists of tissue copies of construction and equipment cost estimates for the Dunderland works (1901). A few pages, dating from 1907, relate to pattern drawings and the cost of installing giant rolls at the New Jersey and Pennsylvania Concentrating Works and the Carnegie Steel Co. The book contains 506 numbered pages; pages 69-500 are blank.

B
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Z

Estimate. Conveyor. Sunderland Plant

H.1.01

Crusher House to Dryer

45' Belt 518 ft. vertical height 98 ft		
1042 ft of belt at 2.50	2600	
2000' - - Rubber edging	521	
Head - Tail Pulleys, frames, shafts, } Gears, gear cases, bearings etc	800	
Conveyor Runway between buildings, including corrugated iron - flooring		
410 ft - 200 lb per ft. 14.25	5740	
Side shafts, bearings - 30' apart on carrying side, 60' apart below. Size idlers every 20 ft		
518 ft at 4.25 per ft.	2317.50	
Motor 150 HP - 20.00 per HP	2000	14183.50
(1000 lbs per ft. - friction 2 1/2 HP per 100 ft)		

Dryer House to Stock House

45' Belt 578 ft. vertical height 52 ft		
1174 ft of belt at 2.50	2925	
2500' - - Rubber edging	515	
Head - Tail Pulleys etc	800	
Conveyor Runway between buildings -		
250 ft at 14.25	3560	
Side shafts - 578 ft at 4.25	2601	
1 Travelling Skipper	750	
Motor 75 HP - 20.00 (500 tons)	1500	12241
		12661

Return belt Dryer to Crusher Area

24' belt 570 ft. 912		
1060 ft of belt at 1.25	1325	
2100' - - Rubber edging	500	
Head - Tail Pulleys etc	825	
Conveyor Runway between buildings		
100 ft - 10.00 per ft.	1000	
Side shafts - 570 ft - 7.25	1500	
Motor 70 HP - 20.00 (500 tons)	600	8950

Amount forward

36557.50

Conveyer - Sunderland

Carriage forward		
Stock House to Grinding House		
26' Belt 404 ft Vertical height 22 ft		
920 ft of belt at 2 1/2 ft per ft	1960	
1960 - " rubber edging	490	
Head & Tail pulleys &c	715	
Conveyer Runway between buildings		
240 ft at 12 ft	2880	
Idlers &c 414 ft at 2 1/2	1694	
Motor 75 HP 2 1/2 (1000 hrs)	1800	9829

Grinding House to Screen House		
41' Belt 412 ft Vertical height 40 ft		
820 ft belt at 2 1/2	2090	
16 ft - rubber edging	412	
Head & Tail pulleys &c	800	
Conveyer Runway between buildings		
260 ft at 14 ft	5152	
Idlers &c 412 ft at 2 1/2	1854	
Motor 100 HP 20 ft (1500 hrs)	2000	12314

Return Belt Screen House to Grinding House		
26' Belt 404 ft Vertical height 40 ft		
820 ft of belt at 2 1/2	1640	
1640 ft - rubber edging	412	
Head & Tail pulleys &c	715	
Conveyer Runway between buildings		
240 ft at 12 ft	4416	
Idlers &c 404 ft at 2 1/2	1614	
Motor 40 HP - (500 to 600 hrs) - 2 1/2	800	6295

Carried forward

667950
665050

Conveyors, Sunderland

Conveyer forward
 Screen House to Blower H^{rs} #1.
 36" Belt 264 ft. Vertical height 70 ft
 540 ft of belt at 25°
 1000 - " Rubber edging
 Head & Tail pulleys 20
 Conveyer Runway between buildings
 205 ft at 12°
 Idlers 264 ft at 25°
 Motor 60 HP. 20 (200 ton per hr)
 1200 6700

Blower House #1 to Magnetic Separator
 36" Belt 426 ft. Vertical height 24 ft
 540 ft of belt at 25°
 1700 - " Rubber edging
 Head & Tail pulleys 20
 Conveyer Runway between buildings
 372 ft at 12°
 Idlers 426 ft at 25°
 Motor 70 HP. 20 (200 ton per hr)
 1700 42200
 715
 4469
 1491
 1400 1023250

Return Belt from Magnetic Separator
 to meet incoming ore
 24" Belt 260 ft. Vertical height 75 ft
 530 ft belt at 12°
 1090 - " Rubber edging
 Head & Tail pulleys 20
 Conveyer Runway between buildings
 216 ft at 10°
 Idlers 260 ft at 25°
 Motor 25 HP. 20 (200 ton per hr)
 6700
 20700
 62000
 16000
 700
 5000
 501125
 501125

Transfer Tower 11220
 1150 1150

Conveyer forward

8900025
 8900425

Conveyor - Sunderland

Brought forward

89,888.25

89,888.25

Magnetite Separator to Hematite Separator.

24 Belt 350 ft. - Vertical height 80 ft	
75 ft of belt at 125	951.25
1570 ft. - Rubber edging	392.50
Head & Tail Pulleys &c	625.00
Conveyor Runway between buildings	
312 ft at 105	3120.00
3 idlers &c 350 ft at 35	1140.00
Motor 40 HP. 205	800.00
(400 lbs)	7056.75

Hematite Separator House to Tower

24 Belt 165 ft. - Vertical height 25 ft	
245 ft of belt at 125	431.25
650 ft. - Rubber edging	172.50
Head & Tail Pulleys &c	625.00
Conveyor Runway between buildings	
104 ft at 105	1040.00
3 idlers &c 165 ft. 35	495.00
Motor 15 HP. 205	300.00
(300 lbs)	3066.75

Transfer Tower 15 x 20

950

950

Magnetite Separator House to Blower House #2

24 Belt 552 ft. - Vertical height 60 ft	
1120 ft of belt at 125	1400.00
2240 ft. - Rubber edging	560.00
Head & Tail Pulleys &c	625.00
Conveyor Runway between buildings	
208 ft at 105	2680.00
3 idlers &c 552 ft at 35	1680.00
Motor 25 HP. 205	800.00
(300 lbs)	7481.00

Carried forward

108,077.75

108,077.75

Conveyors. Sunderland.

Onwards forward

Blower House #2 to Magnetite Stock House

24 Belt 336 ft. Vertical height 82 ft.

685 ft. of belt at 125

1370 - Rubber edging

Head & Tail Pulleys

Conveyor Runway between buildings

257 ft. at 10

Idlers 335 ft. at 3

Motor 20 HP

20

(200 tons)

257.0

1009

400

108077.75

856.25

842.50

625

607175

Tower to Blower House #3

24 Belt 296 ft. Vertical height 60 ft.

605 ft. of belt at 125

1210 - Rubber edging

Head & Tail Pulleys

Conveyor Runway between buildings

255 ft. at 10

Idlers 296 ft. at 3

Motor 25 HP

20

(250 tons)

756.25

802.50

625

2525.00

888

500

562175

Blower House #3 to Hematite Stock House

24 Belt 336 ft. Vertical height 82 ft.

685 ft. of belt at 125

1370 - Rubber edging

Head & Tail Pulleys

Conveyor Runway between buildings

255 ft. at 10

Idlers 336 ft. at 3

Motor 20 HP - 20

(250 tons)

856.25

842.50

625

2560

1009

400

811175

Sents for outside conveyor

Runway - 98 tons - 50¢ per lb.

9800

9800

Carried forward

135677.00

135677.00

Dunderland Estimate -
Conveyors

17-2-51--

#1	Crusher House to Dryer	
	36' Belt, 411 feet C. to C. Vert. lift 77 ft.	
	836 ft. belt, at \$2.22	\$1672.00
	1672' rubber edging	301.60
	Head and tail pulleys, frame, shafts, gears, gear cases, bearings	409.94
	Conveyor runway between buildings including corrugated iron covering and sheet iron flooring - 345 ft. at \$4.22	3312.00
	66 ft. of interior framing at \$2.22	158.40
	2 idlers, idler bearings, side idlers, etc.	
	411 ft. at \$3.22 per foot	1479.60
	5 Bents - average \$120.22 each	600.00
		\$8133.54

— 30 H.P. Motor - 500 tons per hr.

#2	Rotary Belt, Dryer to Crusher	
	24' Belt, 430 feet C. to C. Vert. lift	
	874 ft. belt, at \$1.32	1092.50
	1748' rubber edging	524.40
	Head and tail pulleys, frame, shafts, gears, gear cases, bearings	394.77
	Conveyor runway between buildings including corrugated iron covering and sheet iron flooring - 338 ft. 200 lbs. at \$4.22	2704.00
	92 ft. of interior framing at \$2.22	184.00
	7 Bents - average \$120.22 each	840.00
	Idlers, idler bearings, etc. - 430 ft. at \$3.22	1290.00
		7029.67

— Motor - 20 H.P.

#3	Dryer to Rock Stock House	
	36' Belt, 353 ft. C. to C. Vertical height 56 ft.	
	680 ft. belt, at \$2.22	1362.00
	1360' rubber edging	408.00
	Head and Tail Pulleys, etc.	409.94
	Conveyor runway between buildings - 203 ft. at \$4.22	2908.80
	30 ft. of interior framing at \$2.22	72.00
	Idlers, idler bearings, etc. - 353 ft. at \$3.22	1198.80
	3 Bents - average \$120.22 each	360.00
		6717.54
	Motor - 50 H.P.	
	Carried forward -	\$21,880.75

Lounge.

Brought forward

*4 Lounge in top of Rock stock house

36 Feet - 16 ft C.T.C. - 12 ft

256 ft. of 36 Feet at \$2.22 =

712 rubber siding

Head and tail pulleys etc.

16 ft. interior framing at \$2.22 =

Delivered roller bearings 16 ft. at \$3.50 =

1 Travelling Drifters

712.00

2012.50

409.94

386.40

579.60

680.00

2981.54

— Motor - 25 H.P.

*5 Lounge in top of Rock stock house

36 Feet - 20 ft C.T.C. - Vertical height 7 ft.

482 ft. of 36 Feet at \$2.22 =

962 rubber siding

Head and tail pulleys etc.

234 ft. interior framing at \$2.22 =

Delivered roller bearings 234 ft. at \$3.50 =

964.00

288.60

409.94

563.60

842.00

3066.54

— Motor - 40 H.P.

*6 Lounge from Rock stock house

to Stone Crushing House

36 Feet - 20 ft C.T.C. - Vertical height 6 ft.

554 ft. of 36 Feet at \$2.22 =

1048 rubber siding

Head and tail pulleys etc.

Lounge runway into building

238 ft. at \$9.62 =

41 ft. interior framing at \$2.22 =

Delivered roller bearings 255 ft. at \$3.50 =

3 Bents

1245.55

1048.00

3144.40

409.94

2284.80

98.40

918.00

360.00

5432.54

— Motor - 50 H.P.

brought forward

(2)

5432.54

Conveyors -

Brought forward -

7 Conveyors. Top End Grinding Rolls.

48' Belt. 158 ft. C. to C. 3 S' Dumps.

270 ft. 48' Belt. at \$2.22

740 ft. timber edging -

Head and tail pulleys, etc.

5' 158 ft. interior framing, at \$2.22

Odessa roller bearings 178 ft. at \$4.22

3 S' Dumps. at \$2.22

\$925.00

\$422.00

\$256.22

\$422.40

\$718.90

\$438.66 = \$203.18

Motor - 25 H.P.

8 Conveyors Bottom End Grinding Rolls.

48' Belt. 107 ft. C. to C. 3 S' Dumps.

295 ft. 48' Belt. at \$2.22

1274 ft. timber edging -

Head and tail pulleys, etc.

191 ft. interior framing, at \$2.22

Odessa roller bearings 191 ft. at \$4.22

\$900.00

\$257.60

\$428.22

\$328.80

\$869.08 = \$3057.67

Motor - 20 H.P.

9 Conveyors Grinding House to Berens

48' Belt. 362 ft. C. to C. Vertical height 77 ft.

598 ft. 48' Belt. at \$2.22

1296 ft. timber edging -

Head and tail pulleys, etc.

Conveyors runway between buildings

30 ft. interior framing, at \$2.22

Odessa roller bearings 362 ft. at \$4.22

416 ft. timber edging -

1745.00

\$18.80

\$456.22

\$3494.40

\$84.00

\$1858.10

\$210.00

\$474.52

Motor - 100 H.P.

1,000 tons

Carried forward

(3)

Conveyors

Brought forward

*10 Conveyors - Top of Screens	
48 Belt, 229 ft. C to C, at \$2.50	
572 ft. 48" Belt, at \$2.50	1430.00
1144 rubber edging	343.20
Head and tail pulleys, etc.	456.22
Interior framing, 229 ft., at \$2.50	641.20
Idlers, etc. - 229 ft., at \$4.55	1041.95
5 S Dumps, at \$146.22	731.10
	+ 652.77

Motor - 30 H.P.

*11 Conveyors - Return Belt Screens
to Grinding House

36 Belt, 572 ft. C to C Vertical height 23 ft.	
1158 ft. 36" Belt, at \$2.50	2316.90
2316 rubber edging	692.88
Head and tail pulleys, etc.	409.94
Conveyors running between buildings -	
1310 ft., at \$9.50	2976.00
262 ft. interior framing, at \$2.50	628.80
Idlers + idler bearings 672 ft., at \$3.50	2059.20
4 Bents	480.00
	9564.74

Motor - 50 H.P. 660 rpm per hr.

*11 Conveyors - Finer below Screens

36 Belt, 252 ft. C to C, level	
518 ft. 36" Belt, at \$2.50	1036.00
1036 rubber edging	310.80
Head and Tail Pulleys	499.94
252 ft. interior framing, at \$2.50	604.80
Idlers + idler bearings - 252 ft. at \$3.50	907.20
	3268.74

Motor - 20 H.P.

Carried forward
(4)

15104.84

Conveyors

Brought forward-

\$ 65,404.89

#12 Conveyer. Screens to Blower House - 1.

36 Belt, 263 ft. C to C, Vertical height 89 ft.

528 ft. of 36" Belt, at \$2.50

1080.00

1100 ft. rubber edging.

330.00

Head and tail pulleys, etc.

409.94

Conveyer runway between buildings

236 ft. at \$9.50

2294.40

24 ft. interior framing, at \$2.50

57.50

Sides + idler bearings - 263 ft., at \$3.50

946.80

5 Bents -

600.00

\$ 5718.74

— Motor - 40 H.P.

#13 Conveyer. Top of Blower House - 1.

36 Belt, 165 ft. C to C, 25" Dumps -

344 ft. 36" Belt, at \$2.50

\$ 688.00

688 ft. rubber edging -

206.40

Head + tail pulleys, etc.

409.94

165 ft. interior framing, at \$2.50

396.80

Sides + idler bearings - 165 ft., at \$3.50

594.00

2294.34

— Motor - 25 H.P.

#14 Conveyer. Bottom Blower House - 1.

36 Belt, 166 ft. C to C - level.

346 ft. of 36" Belt, at \$2.50

\$ 692.00

692 ft. rubber edging -

207.60

Head and tail pulleys, etc.

409.94

166 ft. interior framing - at \$2.50

398.40

Sides + idler bearings - 166 ft., at \$3.50

597.50

2305.54

— Motor - 15 H.P.

Carried forward

\$ 75,923.51

Conveyors.

Brought forward.

*13 Conveyer - Oliver St. to Magnetite Magnets - Vertical height 83 ft.	
36' Belts - 367 ft. C. to C.	
748 ft. of 36' Belt, at \$2.22	\$ 1496.00
1496' rubber edging.	448.80
Head and tail pulleys, etc.	409.94
Conveyer runway between buildings.	
327 ft. at \$9.20	3139.20
40 ft. interior framing, at \$2.25	96.00
Idlers + idler bearings 367 ft. at \$3.22	1321.20
Bents and Transfer Tower.	720
	\$ 7631.14

— Motor - 40 H.P. 380 tons.

*16 Conveyer. Top of Magnetite Magnets.

36' Belt - 273 ft. C. to C. - 7 dumps.	
700 ft. of 36' Belt at \$2.22	\$ 1400.00
1400' rubber edging.	420.00
Head and tail pulleys, etc.	409.94
273 ft. interior framing, at \$2.22	655.20
Idlers + idler bearings 273 ft. at \$3.22	982.80
7 Dumps, at \$135.22	947.24
	4812.18

— Motor - 25 H.P.

*17 + *18. Returns to Magnetite Magnets -

24' Belts - 507 ft. each C. to C. Vert. ht. 40 ft.	
2056 ft. of 24' belt, at \$1.22	\$ 2570.00
4112 ft. of rubber edging.	1232.60
Head and tail pulleys, etc.	584.00
Conveyer runway between buildings	
430 ft., at \$8.20	3440.00
584 ft. interior framing, at \$2.22	1168.00
1014 ft. idlers + idler bearings at \$3.22	3042.00
8 Bents -	960.00
	12,997.60

— Motor - 40 H.P.

This drives both conveyers.

Carried forward.

(6)

\$ 101367.45

Carryover.

Brought forward

\$ 191,867.45

*9 Magnetite Magnetite to Hematite Magnetite		
24" Belt - 659 ft. C. to C. - Vertical height, 7 ft.		\$
1532 ft. 24" Belt, at \$1.22	1,665.00	
2666' rubber edging	799.20	
Head and tail pulleys, etc.	394.77	
Carryover runway between buildings		
34.5 ft., at \$8.22	2760.00	
3 1/4 ft. interior framing, at \$2.22	628.00	
Idlers, etc. - 659 ft., at \$3.22	1977.00	
7 Bents	840.00	\$ 9063.97

Motor - 40 H.P.

*20 Magnetite Magnetite to Belt carrying		
concentrate from Hematite Magnetite		
to Delivery House No. 2 -		
24" Belt - 652 ft. C. to C. - Vertical height 5 ft.	12	0
1318 ft. of 24" Belt, at \$1.22	1647.60	
2636' rubber edging	790.80	
Head and tail pulleys, etc.	394.77	
Carryover runway between buildings		
33.8 ft., at \$8.22	2704.00	
3 1/4 ft. interior framing, at \$2.22	628.00	
Idlers + idler bearings - 652 ft., at \$3.22	1956.00	\$ 8121.07

Motor - 25 H.P.

*21 Top of Hematite Magnetite		
24" Belt - 273 ft. C. to C. - 7 dumps		\$
700 ft. of 24" Belt, at \$1.22	875.00	
1400' rubber edging	420.00	
Head and Tail Pulleys, etc.	394.77	
270 ft. interior framing, at \$2.22	546.00	
Idlers + idler bearings - 273 ft., at \$3.22	819.00	
7 "S" dumps, at \$106.68	746.68	\$ 3801.45

Motor - 35 H.P.

Carried forward.

(3)

\$ 123,363.97

Conveyors.-

Brought forwards

\$ 120,953.72

*22*23*24 concentrates below

Hematite Magnets-

24' Belts-296 ft. each C to C-level-

1818 ft. of 24' Belt, at \$1.25

\$ 2272.50

3636 " rubber edging-

1090.80

888 " interior framing, at \$2.50

1776.00

Idlers and idler bearings-888 ft., at \$3.25

2644.00

Head & tail pulleys, combination,
for the three belts-

\$ 620.00

\$ 8453.30

— Motor - 40 H.P.

*25*26-to Dump Hematite Magnets-

24' Belts-500 ft. each C to C-level-

2028 ft. of 24' Belt, at \$1.25

\$ 2535.00

4056 " rubber edging-

1216.80

590 " interior framing, at \$2.00

1180.00

Idlers & idler bearings-1000 ft., at \$3.25

3000.00

410 ft. Conveyer outside, at \$8.25

3280.00

Belts - 4600 - 8 at \$2.00

960.00

Head & tail pulleys, combination
for the two belts-

\$ 584.00

\$ 12,755.80

— Motor - 25 H.P.

*27 Hematite Magnets to Below Hs.-

24' Belt, 429 ft. C to C-Vest-bk., 77 ft.

872 ft. of 24' Belt, at \$1.25

\$ 1090.00

1744 " rubber edging

523.20

Head and tail pulleys, etc.

394.77

Conveyer runway between buildings-

351 ft. at \$8.25

2880.00

78 ft. interior framing, at \$2.25

156.00

6 Belts, at \$120.00

720.00

\$ 5,691.97

— Motor - 30 H.P.

300 tons

Carried forwards

\$ 149,254.99

Conveyors-

Brought forward-
 #28 Convey. Top of Blower House #2
 24' Belt-12 ft. to to b. 2 Dumps-
 269 ft. 24' Belt, at \$1.25 \$336.25
 538' rubber edging- 161.40
 121' interior framing, at \$2.00 242.00
 Head and tail pulleys, etc. 394.77
 Idlers & idler bearings-121 ft. at \$3.00 363.00
 2 Dumps, at \$106.40 213.28
 \$17150.70

Motor-20 H.P.- (for #28)-
 #29 Bottom of Blower House #2
 24' Belt-214 ft. to to b. Vert height 7 ft.
 442 ft. of 24' Belt at \$1.25 \$552.50
 884' rubber edging- 265.20
 214' interior framing, at \$2.00 428.00
 Head and tail pulleys, etc. 394.77
 Idlers & idler bearings-214 ft. at \$3.00 642.00
 2282.47

Motor-15 H.P.-

#30 Blower House #2 to
 Concentrate Stock House.
 24' Belt-780 ft. C. to C. level
 1574 ft. 24' Belt, at \$1.25 \$1967.50
 3148' rubber edging- 944.40
 Convey. runway between buildings-
 780 ft., at \$8.00 6240.00
 Head and tail pulleys, etc. 394.77
 Idlers & idler bearings-780 ft. at \$3.00 2340.00
 10 Dents- 1200.00
 13,086.67

Motor-25 H.P.-

Carried forward-

\$166,884.51

166,884.51

Conveyors.

Brought forward

\$ 160,000.00

*51 Conveyors in Roof of
Concentrate Stock House

24' Belt - 161 ft. C. to C. - level

\$ 420.00

336 ft. of 24' Belt, at \$1.25

201.60

672' rubber edging

322.00

161' interior framing, at \$2.00

324.77

Head and Tail pulleys, etc.

483.00

Idlers and idler bearings, 161 ft., at \$3.00

680.00 2471.37

Travelling Triples

— Motor - 25 H.P.

Total.

\$ 165,800.00

Magnetics Magnets.

160 sets of 3 high.

80 " " 6 " "

960 Magnets - 200 lbs. each -

288,000 lbs. at \$11.520.00

Labor - 76,800 " " 20. 15360.00

Angle iron framework, chutes etc.
for the 160 sets of 3 high -

176,000 lbs. at 3.520.00

Angle iron framework, chutes etc.
for the 80 sets of 6 high -

+ 07,360 lbs. at 8.147.20

Labor on 288,000 lbs. at 3.

8640.00

" " 583,360 " " 2.

11667.20

Labor winding 960 magnets at \$6.25

5760.00

\$64,614.40

Note - see list.

No erection.

Hematite Magnets-

256 sheets of 20 high.

5120 Magnets - 360 lbs. each -

1,536,000 at \$ 61440.00

Copper - 409,600 - 20. 81920.00

Angle iron in framework,
sheets in chutes, etc. -

1,020,416 at 20 20408.32

Labor on 1,536,000 lbs. at 20. 46080.00

1,020,416 - 20. 20408.32

Labor, winding 5120 magnets, at 60. 30720.00

\$260,976.64

Motor.

See motor list.

No erection.

Motors.-

Hoist for Crusher Plant-	150 H.P.
Grain Roller. 2 - 75 H.P.	150 "
First Set 5 ft. Roller-	60 "
Second " " "	80 "
Third " " "	100 "
Fourth & Fifth. . . - 100 H.P. each	200 "
Top Roller Feed.	5 "
Bottom " "	10 "
Strip Tip.	10 "

6 Fine Grinding Roller 150 H.P. each 900 H.P.

— Dryer House.

Exhausters - 2 - 25 H.P. each.	50 H.P.
Furnace Blower.	15 "
Shaker Mechanism - 2 - 5 H.P. each.	10 "

— Rock Stock House.

Roller Feeds - 3 of 10 H.P. each.	30 H.P.
Exhaust Fan.	25 "

— Screen House.

Roller Feeds - 6 of 15 H.P. each.	90 H.P.
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— Blower House #1.

Blowers. 16 of 5 H.P. each.	40 H.P.
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— Blower House #2.

Blowers. 12 of 5 H.P. each.	60 H.P.
in Compressor.	150 "

+ Scrapers Conveyors - 25 H.P. each 100 H.P.

All Belt Conveyors - see list. 955 "

Motors - 3230 H.P.

Dynamos	3230 H.P.
Magnetite Magnets.	75 "
Magnetite	750 "
	4055 H.P.

Less 4000 H.P. Dynamos, at \$1625 64000.00
 3230 " Motors, " \$1825 58140.00

12140.00 12140.00

24', 36' and 48' Belt Conveyors-

Head and Tail Pulleys-

24' Belt Conveyor-

Cast iron-	2,250 lbs. at 2 $\frac{1}{2}$	\$ 36.25
Steel shafting-(4 $\frac{1}{2}$ " + 2 $\frac{1}{2}$ ")	426 " 3	12.78
Bolts, rods, etc.	135 " 12	3.71
Maple Staves-		2.70
Spur Gears-		48.00
2-2 $\frac{1}{2}$ " Bearings at 13.22	} Cost complete-	27.84
2-3 $\frac{1}{2}$ " " " 19.23		38.16

Tail Pulley-

Cast Iron	1094 lbs. at 2 $\frac{1}{2}$	27.35
Steel shaft-	237 " 3	7.11
Bolts, Rods, etc.	100 " 12	2.75
Maple Staves-		2.70
2-3 $\frac{1}{2}$ " Bearings at 19.23-cost complete-		38.16
Linen 4 1/2 lbs. at 3.		12.72
		<u>\$ 394.77</u>

Head and Tail Pulley
for 36' Belt Conveyor-\$ 409.94Head and Tail Pulley
for 48' Belt Conveyor-\$ 456.22Above does not include
cost of erections.

24', 36' and 48' Belt Conveyors-

Cost per linear foot of 24'
includingidler Bearings, Single Pieces,
Idlers and Vertical Idlers-

In 30.-ft. length.-

20-1 1/2" shafts-	240 lbs. at 3	720
40 Spindles-	360 " " 3	1080
40 Bearings	360 " " 4	1440
Bolts and pins-		160
Maple staves-		720
Lathams and packing-		420
120 Oil plugs		600
Labor on 960 lbs., at 3-		2880
2 Vertical Idlers-		
Cast Iron	70 lbs., at 4	280
Steel Spindles-	6 " " 3	18
Bolts-		25
Cast Iron Blocks-	12 " " 3	36
Labor on 88 lbs., at 4-		352
4 Plugs-		20
		<hr/> \$ 87.51

24' - $\$3.22$ per ft.

36' " $\$3.50$ " "

48' " $\$4.55$ " "

Cost of erection not included-

'S' Dumps in Belt Conveyors
24', 36' and 48' Belts

24'-		
1 Shaft-	168 lbs., at 3.	\$ 5.04
2 Spiders-	220 " " 2 1/2	5.50
Bolts-		1.35
Maple 65 ft., at \$30.00		1.95
2 - 2 1/2" Bearings - at \$19.00		27.84
Labor on 388 lbs., at 3-		11.64
		<u>\$ 53.32</u>
2 Shafts, etc.-		<u>\$ 106.64</u>

36'-		
1 Shaft-	220 lbs., at 3.	\$ 6.60
2 Spiders-	220 " " 2 1/2	5.50
Bolts-		1.35
95 ft. Maple, at \$30.00		2.85
2 - 3 1/2" Bearings - at \$19.00		38.16
Labor on 440 lbs., at 3-		13.20
		<u>\$ 67.66</u>
2 Shafts, etc.-		<u>\$ 135.32</u>

48'-		
1 Shaft-	265 lbs., at 3.	\$ 7.95
2 Spiders-	250 " " 2 1/2	6.25
Bolts-		1.55
125 ft. Maple at \$30.00		3.75
2 - 3 1/2" Bearings - at \$19.00		38.16
Labor on 515 lbs., at 3-		15.45
		<u>\$ 73.11</u>
2 Shafts, etc.-		<u>\$ 146.22</u>

9' Scraper conveyors in Blower Houses.

1 Head and 1 Tail Pulley.			
Iron castings.	2,002 lbs., at \$		50.05
Channels, angle iron,			
sheet steel, etc.	2,935 " " "		58.70
Shafting.	710 " " "		21.30
Wire.	520 " " "		10.40
Leaves.			120.00
2 - 2 1/2" Bearings at 13.22			27.84
4 - 3 1/2" " " 19.02			76.32
Labour 6267 lbs., at 2.			125.34
			<u>\$489.95</u>

9' Scraper conveyor costs
 \$9.58 per linear foot, including
 Rope, Rope lumps, blank
 Belts, Pulleys, Wheels, Blades,
 Rail, etc.

2 conveyors in Blower House No. 1 -
 each 198 ft. long -
 2 Head and 2 Tail Pulleys. \$979.90
 396 ft. at \$9.58. 3793.68

2 conveyors in Blower House No. 2 -
 each 154 ft. long -
 2 Head and 2 Tail Pulleys. \$979.90
 308 ft. at \$9.58 2950.64
\$8,704.12

- Erection -

Dryer House

2 Dryers-

Plates, girders etc., bottom chute, furnace castings,		
shaker and distributor plates, 285,000 lbs. at $\frac{1}{2}$	125.00	
Erection machined-	12,240 " 28	306.00
Machine work -	" " 3	367.20
Steel sheet and angles-	19,520 " 2	390.40
Labor on same-	" " 2	390.40
Sheetpiling-	8,636 " 32	237.69
Machine work-	" " 3	259.08
Stick and tank steel-	17,000 " 2	340.00
Labor on same-	" " 2	340.00
Rope lammers-	150 " 3	4.50
Labor on same-		10.00
12 Screens-		36.00
Bolts-		267.86
Asbestos in joints-		54.00
2 Dust chasers, with steel chute, 9,000 lbs.	180.00	
Labor on same-		180.00
2- 80" Exhausters (Buffalo)-	410.00	
1 Blower for Furnaces-	110.00	
2 Pyrometers, with fixtures-	100.00	
44,000 Fire Brick at $\frac{1}{2}$ 322	1012.00	
25,000 Red " " 82	2000.00	
Foundation bolts-	5600 " 3	1680
Firing tools-		18.00
	12,354.93	12,354.93

Erection -

2 Motors - 25 H.P. Exhausters.	
1 " 15 H.P. Blower for Furnaces	
2 " 5 H.P. Shaker Mechanism	

Rock Stock House

Three panels of 7 lights each
1 Panel -

Castings-	9686 lbs. at	26.	242.16
Labor on same	" " "	3.	290.58
Shelled liners-	959 " "	23.	31.17
Shafting-	1792 " "	3.	53.76
Labor on same	" " "	3.	53.76
Steel keys, turned bolts, etc.	96 " "	3.	2.88
N. D. rods, bolts, nuts etc.	565 " "	23.	10.39
7 lights, at \$20.00 each			210.00
8-2 1/2" Bearings at \$13.25 each			118.36
4-2 1/2" " " \$10.50 "			147.84
			<u>1134.09</u>

3 Panels

\$3,462.27

Erection.

— 3-10 H.P. Motors - see motor list.

Furnace for Rock Stock House

Castings-	5,000 lbs. at	\$120.00
Bolts, Rods etc.	400 " "	8.00
20,000 Red Brick, at \$8		160.00
4,000 Fire " "	\$23.25	92.00
Firing Tools-		12.00

Exhaust Fan -

400.00
<u>\$847.00</u>

— 1-25 H.P. Motor - for Fan.

Erection.

Shindag House

6 Rolls of Fine Stranding Roller		
Plot of Roller & Practical Paper		
Grey Iron Castings	634 14 14	1635.58
Cast Iron Plates	184 5 5	59.80
6 Spacing Roller 0.50 lbs.	110 2 2	660.00
Brass Castings	878 22 22	193.16
Brass	222 5 5	5.60
Hammered Sheet Steel	14,650 4 4	659.28
Steel Shafts 1/2" dia.	140 3 3	4.28
Old R. & Macab. Sheet	848 4 4	217.92
Steel Fastened Bolts etc.	1130 3 3	33.90
Bolts, nuts, etc.	710 22 22	79.35
		<u>3490.42</u>
Labor on 92,683 lbs. at 0.2		4832.81
Foundation Plates - 12,260 lbs. at 2 1/2	337.18	8309.93
		<u>13142.81</u>

6 Tightening Devices		
Cast Iron Castings	376 5 5	94.20
Brass	180 10 10	39.60
Brass	9 12 12	198
Steel Shafts (3/4")	22 5 5	6.75
32 ft. 9" Channels	571 2 2	1142
28 ft. 9" Channels	30 2 2	90
Steel Keys, bolts etc.	263 2 2	723
Bolts, nuts, etc.		<u>1620.8</u>
Labor on 5046 53 53	262.39	424.47
350 ft. Wire Rope	42.00	<u>42.00</u>
		<u>9113.55</u>

6 Rolls

54,681.30

Grinding Stone:-

6 Sets of Fine Grinding Rolls-
Feed Mechanism, and rollers above
and below Rolls: For 1 Set of Rolls-

Gray Iron Castings etc.	1762.24	44.00
Rolls	58.24	31.89
Roller	2.94	51.98
Steel Shafting (3 in.)	2.16	49.82
50 ft. 6 in. Rollers	17.24	42.10
12 in. 6 in. Rollers	22.98	44.16
Angle Iron & Steel Bolts	20.00	50.24
Steel Keys, Trunnion Bolts, etc.	46.2	23
Bolts, Nuts, Washers, etc.	118.24	2.49
Spacers and Lubricators	50.2	13.90
4 to 2 1/2 Bearings to 10 in.	5.24	42.24
Labor on	4442.4	477.66
		5670.16

6 Rolls-

200 ft. 7 in. Rollers

200.00	2020.26
20.00	20.00

6 Fine Grinding Rolls including
tightening mechanism, rollers below
rolls, roller feed, and roller
above roller feed.

Rolls	22.24	5.7
32 in. 6 in. Castings	2.16	11.2
Roller	20.2	20
Steel keys etc.	20.24	7.25
		56.70.56

6 - 200 ft. 7 in. Rollers - see material list

20.00	20.00
20.00	20.00

300 ft. 7 in. Rollers

20.00	20.00
20.00	20.00

6 Rolls-

20.00	20.00
20.00	20.00

Screens.

1152 Screen Plates, arranged in
6 groups. Each group containing
32 banks and each bank 4 sets -
6 high - making 192 sets.

Cast Iron Hoppers and Gates above
Screens for Roller Feed - 192 in
number. Hoppers 5'-0" long. 370 lbs each
(No machine work) 71,040 lbs. at 24. \$ 1776.00

1344 ft. 10" Pipe at \$4.25 per 60 ft (52760 lbs)	2419.20
192 C.S. Pipe and 2,840 lbs. at 28.	96.00
36 " Stands 2,880 " " 28.	72.00
660 ft. 2 1/2" shafting 10,428 " 22.	260.70
6 sets of four bearings at \$36.00	216.00
48 " Motors " " \$10.25	480.00
180 - 2 1/2" Bearings at \$10.25 complete.	1900.80

bolts above and below each group
of Screens formed of 1/4" sheet iron
in the form of a pipe -

9870 - 6 89,220 lbs. at 2.	1884.40
1152 Screens at 50 cts.	576.00
Screen Frames 46,080 lbs. at 2.	921.60
Screen boxes 190 lbs. at 9.120 " 26	228.00
240 " 6 1,440 " 26	36.00
Labor on 10,560 " 2	316.80
" " 176,208 " 2	3624.16
	<u>\$ 14,007.66</u>

- 3-15 H.P. Motors - see motor list.

No sections

Blower House No. 1.-

32 Blowers-

Blowers-	lbs	ct	*
Sheet Steel and Angle Iron	1411	2	2822
Blades-- " "	335	2	670
Castings-Blade Casters-	108	22	270
Sheet 1 Sheet Steel-	379	2	1158
Castings - 5 wt #22-			3500
Brackets- Cast Iron.	180	22	450
Hanger - " "	70	22	175
Gears-			2035
Gear Cases- Cast Iron.	40	22	100
" " - Steel	310	2	620
Shafting-	180	2	340
			<u>12340</u>
Labor etc	3213	2	<u>9639</u>
			<u>21979</u>

Bin-	lbs	ct	*
Sheet Steel and Angle Iron	1585	2	
" " " " Air Pipe	1016	2	
" " " " Return Valve	650	2	
" " " " Chute below	1609	2	
" " " " "	40	2	12000
" " " " Hopper	590	2	
Cast Iron Connection	175	22	
" " Hopper-	370	22	
Sheet Steel and Angle Iron and Steel Siding	500	2	1550
Cast Iron at each 3"	75	22	
120 yds. Shafting-		8	960
Labor etc	6610	2	<u>19830</u>
			<u>34240</u>

1 Bin, Blower, Air Pipe and
connecting labor - \$563.19- # 15022.08 # 15022.08

32 Bins-

Construction

16-5 H.P. Motors - Lee Motor List-

Blower House No. 2-

24 Blowers-

1 Bin, Blower, Air Pipe - and
Connecting Shuts: \$563.19

24 Bins

\$ 13516.56 \$ 13516.56

12-5 H.P. Motors - see motor list.

-Erection-

Dunderland.

12-28-01.

Structural Work - Houses.

Crusher House.	95 tons.
Hinders in Crusher House.	82 "
Truckle Approach & Extension.	102 "
Dryer House.	187 "
Rock Stock House & Lean-to	158 "
Fine Grinding House.	218 "
Screen House.	331 "
Blower House #1.	234 "
Magnetite Separator House	485 "
Hematite	388 "
Blower House #2.	182 "
Concentrate Stock House	125 "
Coal Store House.	127 "
Engine House.	80 "
Boiler	80 "
Store House.	60 "

3087 tons.

3087 tons erected at \$80.22 \$ 246960.00

Corrugated Covering, #18 and #20. 51587.00

Excavation, 20676 cu yds., at 25 cts. 5161.50

Dry Wall, 2800 cu yds., at \$1.32 4200.00

Concrete, 3505 cu yds., at \$3.22 10515.00

Heavy Masonry } 5200 cu yds. at \$2.82 14560.00
Crusher Piers }

Carried forward. \$ 332913.51

(1A)

Dunderland.

12-23-01.

Brought forward.

\$ 32,913.80

Machinery.

Giant Rolls 7'x7'	} Crushing Plant.	\$ 69,221.90
5 Sets, 5'x3' Rolls.		
Horist.		
Tipping Arrangements.		
Hoppers.		
Roller Feeds.		

Dryer House.	12354.93
Rock Stock House.	4309.27
Fine Grinding House.	56701.56
Screen House.	14007.66
Blower House #1.	18022.08
Magnetite Magnets.	64614.40
Nematite.	26097.664
Blower House #2.	13516.56
Chutes - Conveyors to Conveyors.	15000.00
Belts & Scraper Conveyors,	
including Runways.	177510.32
Motors - 3230 H.P., at \$ 18.00	58140.00
Generators - 4000 H.P., at \$ 16.00	64000.00
Steam Plant - 4000 H.P.	140000.00
Oiling System.	2000.00
Heating.	9000.00
Electrical appliances,	
wiring, lights, etc.	15000.00

4 Steam Shovels, at \$ 3000.00	12000.00
35-3 1/2" Rock Drills, at \$ 250.00	8750.00
Mining Supplies.	5000.00
50 Mine Cables, at \$ 160.00 each.	8000.00
50 " " " " " \$ 15.00	750.00
Two Air Compressors.	500.00
Small Machine Shop.	2500.00
Erection of Machinery.	69123.40
	1095,998.32

Total —

\$ 1428,911.82

Estimate - Dunderland.

12-28-01.

Mr. Edison:

This estimate, so far as I have been able, is based on actual cost of material furnished to Stewartville, adding 2 or 3 cents per pound for machine work according to the class of work.

The Conveyor Runways have been calculated at 4 cents per pound, and allowance has been made for a walkway on each side of the belt. The length of the runways has been gotten by carefully laying out the various houses of the plant in their relative positions, with regard to the ground level and making the angle of all belt conveyors at 15°. If a walkway on one side of the belt only is desired, \$6500.00 can be deducted from this estimate.

Fine Grinding Rolls - as figured at cost, as built in Laboratory. Good Crusher, 5 ft. Rolls, Stoppers etc. in Crusher Plant are figured at 3 cents per pound, - complete but not erected.

Structural Work (Houses) is figured at \$80.00 per ton erected, and as the Blower Houses at Stewartville are almost identical with most of the houses for Dunderland D.

I have taken them as our basis of calculation, adding 25% on account of greater height etc. necessitating somewhat heavier construction. Stock Houses being identical with Cement Stock 5' - 11', I have taken these as a basis.

Blower House at Stewartville:

56' x 148' x 51' - 150 tons.

Houses at D under and:

Fine Grinding House	65' x 210' x 43'	200 tons
Screen House	40' x 275' x 74'	501 "
Blower #1	56' x 198' x 52'	234 "
" #2	56' x 154' x 32'	182 "
Magnetite Sep. Ho.	56' x 315' x 13'	435 "
Hematite "	56' x 315' x 12'	328 "

Above is made for comparison.

Estimate - Dunderland.

12-28-01.

Excavation - with which is also included levelling - is taken at 25 cents per cu. yd. - Dry Wall at \$1.25 - concrete at \$3.25 and Heavy Masonry at \$2.25 per cu. yd.

The amount added for erection of machinery in houses I have put at ~~\$25~~ \$123.25, and this is only at the rate of $\frac{1}{2}$ cent per pound.

No allowance has been made for freight, duties, timbers in stairs and floors, for R.R. tracks in the Plant proper, for handling coal from R.R. to coal store - for water for Boilers and Engines - or for conveyors to do - is.

Should not think this plant can possibly be erected for less than \$1,475,000 - exclusive of freight and duties, unless considerable change can be made in the amount of machinery to be used, size of houses, etc.

This estimate is based on handling 5,000 tons of coal ore every 20 hours, with no allowance has been made having in view future extension. Also the Magnetite Concentrates mingle with the Hematite concentrates, as they pass to the final blower house and are then passed to one common stock house.

By cutting out the return belt from Magnetite Magnetite to chest in room - you can cut out \$12,497.22. By changing angle of conveyor belt between buildings from 13° to 14° you can cut out \$3735.22.

Dunderland Estimate- Conveyors-

12-29-01.

*1. Crusher House to Dryer.

36" Belt, 411 ft. a. to c., belt lts. 77 ft.	
836 ft. Belt, at \$2.22	1 672.00
1672' rubber edging, at 21 cents.	351.12
Head and tail pulleys, frames, shafts, gears, gear cases and bearings.	378.66
Conveyer runway between buildings, including corrugated iron covering and sheet iron flooring, 345 ft., at \$9.62	33 12.00
66 ft. of interior framing, at \$2.22	158.40
Idlers, bearings, side idlers etc.	
411 ft., at \$3.22	1479.60
5 Bents, average \$120.22 each.	600 798.77

— 60 H.P. Motor - 500 tons per hour.

*2. Return Belt, Dryer to Crusher.

24" Belt, 430 ft. c. to a., level.	
874 ft. Belt, at \$1.22	1 092.80
1748' rubber edging, at 21 cents.	367.08
Head and tail pulleys, frames, shafts, gears, gear cases and bearings.	349.94
Conveyer runway between buildings, including corrugated iron covering and sheet iron flooring, 335 ft. - 180 lb. at \$5.82 per ft.	2 704.00
92 ft. of interior framing, at \$2.22	184.00
7 Bents, average \$120.22 each.	840.00
Idlers, roller bearings etc. 430 ft., at \$3.22	1 290.00
	6827.52

— Motor - 200 H.P.

*3. Dryer to Rock & Tank House

36" Belt, 553 ft. c. to c., rest. lts. 36 ft.	
680 ft. Belt, at \$2.22	1 360.00
1360' rubber edging, at 21 cents.	286.60
Head and tail pulleys, etc.	378.66
Conveyer runway between buildings - 503 ft., at \$9.62	2 908.80
30 ft. of interior framing, at \$2.22	72.00
Idlers, idler bearings, etc. 553 ft., at \$3.22	1 198.80
3 Bents, average \$120.22 each.	360.00
	6543.85
— Motor - 50 H.P. carried forwards	2 143.14

Corveyors-

Brought forward-

* Corveyor in top of Rock Stock House-

36' Belt, 161 ft. etc. each.

355 ft. of 36' Belt, at \$2.22.

712 rubber edging, at 21 cents.

Head and tail pulleys, etc.

161 ft. interior framing, at \$2.22

Idlers & idler bearings, 161 ft. at \$3.68

1 Travelling Trippler.

712.00

149.52

378.68

386.40

579.60

680.00

21343.14

- Motor - 20 H.P.

* Corveyor in bottom of Rock Stock House.

36' Belt, 234 ft. etc. to vert. hls. 7 ft.

482 ft. of 36' Belt, at \$2.22

964 rubber edging, at 21 cents.

Head and tail pulleys, etc.

234 ft. interior framing, at \$2.22

Idlers & idler bearings, 234 ft. at \$3.68

964.00

202.44

378.68

561.60

842.40

2949.09

- Motor - 20 H.P.

* Corveyor from Rock Stock House
to Fine Grinding House

36' Belt, 524 ft. etc. to vert. hls. 67 ft.

524 ft. of 36' Belt, at \$2.22

1048 rubber edging - 21 cents.

Head and tail pulleys, etc.

Corveyor runway between buildings,

238 ft., at \$9.62

57 ft. interior framing, at \$2.22

Idlers & idler bearings, 524 ft. at \$3.68

3 Belts, at \$120.22 each.

1048.00

220.08

378.68

2184.80

40.80

918.00

360.00

5250.38

- Motor - 50 H.P.

Carried forward.

32456.73

Conveyors.

Brought forward		
*7 Conveyer Top Fine Grinding Rolls.		32426.73
48' Belt. 158 ft. c. to c. - 3 S' Dumps.		
870 ft. of 48' Belt, at \$2.22	925.00	
740' Rubber edging, at 21 cents.	155.40	
Head and tail pulleys, etc.	414.19	
158 ft. interior framing, at \$2.22	442.40	
Rollers and idler bearings 158 ft. at \$4.50	718.90	
3' S' Dumps, at \$120.00	362.64	3018.55

— Notes. 25 H.P.

*8 Conveyer Bottom Fine Grinding Rolls		
48' Belt. 191 ft. c. to c. - level.		
396 ft. 48' Belt, at \$2.22	900.00	
792' Rubber edging, at 15 cents.	118.80	
Head and tail pulleys, etc.	414.19	
191 ft. interior framing, at \$2.22	534.80	
Rollers & idler bearings. 191 ft., at \$4.25	869.05	2926.84

— Notes. 20 H.P.

*9 Conveyer Grinding House to Screens.		
48' Belt. 342 ft. c. to c. Vert. etc. 77 ft.		
698 ft. 48' Belt, at \$2.22	1745.00	
1396' Rubber edging - 15 cents.	209.40	
Head and tail pulleys, etc.	414.19	
Conveyer running between buildings,		
312 ft., at \$1.12	3494.40	
20 ft. interior framing, at \$2.22	84.00	
Rollers & idler bearings, 342 ft., at \$4.50	1556.10	
6 Bents - \$20.00	720.00	8223.09

— Notes. 100 H.P.

1,000 tons.

(5) Brought forward 46597.19

Conveyors.

Brought forward.

\$ 46597.19

*10 Conveyors - Top of Screens.	
48' Belt, 229 ft. c. to c. 2' 5" diameter	
572 ft. 48' Belt, at \$2.22	\$ 1430.00
1144' rubber edging, 15 cents.	171.60
Head and tail pulleys, etc.	414.19
Interior framing, 229 ft. at \$2.22	641.20
Idlers & idler bearings, 229 ft. at \$4.22	1041.95
5' S' dumper, at \$120.22	604.40
	4308.34

— Motor - 20 H.P.

*11 Conveyors Return Belt Screens
to Grinding House.

36' Belt, 872 ft. c. to c. Belt. hie 25 ft.	
1188 ft. 36' Belt, at \$2.22	\$ 2516.00
2316' rubber edging, 15 cents.	347.40
Head and tail pulleys, etc.	378.65
Conveyor runway between buildings	
310 ft. at \$9.82	2976.00
262 ft. interior framing, at \$2.22	628.80
Idlers & idler bearings, 872 ft. at \$2.22	2059.20
4 Belts, at \$120.22 each.	480.00
	9186.05

— Motor - 20 H.P.

600 tons per hr.

*12 Conveyors - Finer below Screens.

36' Belt, 252 ft. c. to c. each.	
518 ft. 36' Belt, at \$2.22	\$ 1036.00
1036' rubber edging, 15 cents.	155.40
Head and tail pulleys, etc.	378.65
252 ft. interior framing, at \$2.22	604.80
Idlers & idler bearings, 252 ft. at \$3.62	907.20
	3082.05

— Motor - 20 H.P.

Carried forward \$ 63168.65

Conveyors.

Brought forward-

* 12 Convey. Screen to Blower House "1.

36' Belt, 263 ft. c. to c., incl. 8 ft. 39 ft.

340 ft. 36" Belt, at \$2.22 # 1080.00

1080' rubber edging, at 15 cts. 162.00

Head and tail pulleys, etc. 378.68

Conveyer runway between buildings-

239 ft., at \$9.62 2294.00

24 ft. interior framing, at \$2.22 57.60

Idlers & idler bearings, 263 ft., at \$3.58 946.80

5 Bents, at \$120.00 each. 600.00

5519.05

- Motor. 40 H.P.

* 14 Convey. Top of Blower House "1.

36' Belt, 165 ft. c. to c., 3' S" drums-

344 ft. 36" Belt, at \$2.22 # 688.00

688' rubber edging, at 15 cts. 103.20

Head and tail pulleys, etc. 378.65

165 ft. interior framing, at \$2.22 396.00

Idlers & idler bearings, 165 ft., at \$3.58 594.00

3' S" drums, at \$110.00 332.04

2491.89

- Motor. 25 H.P.

* 15 Convey. Bottom of Blower House "1.

36' Belt, 166 ft. c. to c., incl.

346 ft. of 36" Belt, at \$2.22 # 692.00

692' rubber edging, 15 cts. 103.80

Head and tail pulleys, etc. 378.66

166 ft. interior framing, at \$2.22 398.40

Idlers & idler bearings, 166 ft., at \$3.58 597.60

2170.46

- Motor. 15 H.P.

Carried forward

73350.02

Conveyors

Brought forward		73350.02
16 Conveyer. Blended Blanks - 1		
to Magnetite Magnete-		
36' Belt, 367 ft. 2 to 2, rest 82 ft.		
748 ft. of 36' Belt, at \$2.22	1496.00	
1496' rubber edging - 15 cts.	224.40	
Head and tail pulleys, etc.	378.65	
Conveyer running between buildings		
327 ft., at \$9.55	3139.20	
40 ft. interior framing, at \$2.22	96.00	
Idlers & idler bearings, 2507 ft., at \$3.65	1321.20	
Drums and Transfer Tower -	720.00	7375.45

— Motor - 40 H.P. 280 tons.

17 Conveyer. Top of Magnetite Magnete-		
36' Belt. 273 ft. 2 to 2. 7 drums.		
700 ft. 36' Belt, at \$2.22	1400.00	
1400' rubber edging at 15 cts.	210.00	
Head and tail pulleys, etc.	378.68	
273 ft. interior framing, at \$2.22	655.20	
Idlers and idler bearings, 273 ft. at \$3.22	982.80	
7 Drums, at \$110.55	774.76	4401.41

— Motor - 25 H.P.

18 Magnetite Magnete to Hematite Magnete		
24' Belt. 659 ft. 2 to 2; rest 82 ft.		
1332 ft. 24' Belt, at \$1.52	1655.00	
2664' rubber edging, at 15 cts.	399.60	
Head and tail pulleys, etc.	349.94	
Conveyer running between buildings		
345 ft., at \$8.22	2760.00	
314 ft. interior framing, at \$2.22	628.00	
Idlers & idler bearings, 659 ft., at \$5.22	1977.00	
7 Drums - 120.22	840.00	8619.54

— Motor - 40 H.P.

Brought forward 898746.42

Conveyors.

Brought forward \$ 93746.42

*9 Magnetite Magnete to Belt carrying
concentrate from Hematite Magnete
to Brown House #2.

24' Belt, 652 ft. a to c, incl. 3 ft. -
1318 ft. of 24' Belt, at \$1.25 1647.50

26% rubber edging, 13 etc. 395.40

Head and tail pulleys, etc. 349.94

Conveyor runway between buildings -
338 ft., at \$5.00 2704.00

314 ft. interior framing, at \$2.25 628.00

Odless roller bearings, 652 ft., at \$3.22 1956.00

7620.84

— Motor.. 25 H.P.

30. Top of Hematite Magnete -

24' Belt, 273 ft. a to c, incl. of dumps. # 875.00

700 ft. 24' Belt, at \$1.25 210.00

1400 rubber edging, at 15 etc. 349.94

Head and tail pulleys, etc. 546.00

273 ft. interior framing, at \$2.25 819.00

Odless roller bearings, 273 ft., at \$3.22 673.40

7 "S" dumps, at \$9.60 3475.34

— Motor.. 35 H.P.

31, 32, 33 Concentrates below
Hematite Magnete -

24' Belt, 296 ft. each a to c, incl. - # 2272.50

1818 ft. of 24' Belt, at \$1.25 345.40

3636 rubber edging, 15 etc. 1776.00

888 interior framing, at \$2.25 2664.00

Odless roller bearings, 888 ft., at \$3.22 650.00

Head & tail pulleys - combination -
for the three belts. } 7907.90

— Motor.. 40 H.P.

Brought forward \$ 112808.30

Conveyors.

Brought forward		\$ 12 808.50
24 25 To Dump - Hematite Magnete.		
24' Belt - 810 ft each c. to s. - 1600		
1340 ft. of 24' Belt, at \$ 1.25	\$	1675.00
2680 rubber edging - 15 etc.		402.00
590 interior framing, at \$ 2.00		1180.00
Idlers & idler bearings, 680 ft., at \$ 2.50		1890.00
40 ft. Conveyor - outside, at \$ 1.25		50.00
Head & tail pulleys, combination for the two belts.		564.00
		6031.00

- Motor - 25 H.P.

25 Hematite Magnete to Blower H. 2		
24' Belt, 429 ft. c. to s. - vert. ht. 77 ft.		
872 ft. of 24' Belt, at \$ 1.25	\$	1090.00
1744 rubber edging - 15 etc.		261.60
Head and tail pulleys, etc.		349.94
Conveyor runway between buildings		
351 ft., at \$ 8.25		2888.00
78 ft. interior framing, at \$ 2.00		156.00
Idlers & idler bearings, 429 ft., at \$ 2.50		1072.50
6 Bents, at \$ 120.00		720.00
		6672.54

- Motor - 30 H.P. 200 tons

27 Conveyer. Top of Blower H. 2		
24' Belt, 121 ft. c. to s., 2 Dumps		
289 ft. 24' Belt, at \$ 1.25	\$	361.25
538 rubber edging - 15 etc.		80.70
121 interior framing, at \$ 2.00		242.00
Head and tail pulleys, etc.		349.94
Idlers & idler bearings, 121 ft., at \$ 2.50		302.50
2 Dumps, at \$ 96.25		192.50
		1564.29

- Motor - 30 H.P.

Carried forward \$ 127076.83

Conveyors.

Brought forward-

\$ 27076.33

28 Bottom of Blower House = 20-

24' Belt, 2 1/2 ft. a to c, west side, 7 ft.

442 ft., 24' Belt, at \$1.32

\$ 552.60

884 - rubber edging, at 15 cts.

132.60

214 - interior framing, at \$2.25

428.00

Head and tail pulleys, etc.

349.94

Idlers & idler bearings, 214 ft., at \$3.22

642.00

2145.04

— Motor. 15 H.P.

29 Blower House 2 to

Concentrate Stock House:

24' Belt, 780 ft. a to c, level.

1574 ft. 24' Belt, at \$1.32

\$ 1967.50

3148 ft rubber edging, at 15 cts.

472.20

Conveyor runway between buildings,

780 ft., at \$8.22

6240.00

Head and tail pulleys, etc.

349.94

Idlers & idler bearings, 780 ft., at \$3.88

2340.00

10 Bents, at \$10.00

1000.00

12369.64

— Motor. 25 H.P.

30 Conveyor in Roof of

Concentrate Stock House:

24' Belt, 161 ft. a to c, level.

335 ft. of 24' Belt, at \$1.32

\$ 420.00

672 - rubber edging, at 15 cts.

100.80

161 ft interior framing, at \$2.25

322.00

Head and tail pulleys, etc.

349.94

Idlers & idler bearings, 161 ft., at \$3.22

483.00

Trussing timber.

632.00

2323.74

— Motor. 25 H.P.

Carried forward.

243876.78

Conveyors.

Brought forward-
 *31 + *32. Returns to Magnetite Magnets,
 to meet incoming ore.
 24' Belts, 50 ft each x 2 c., rest h.t. + 40 ft.
 2056 ft. of 24' Belt, at \$1.25 2570.00
 4112 " Rubber edging, at 15 cts 616.80
 Head + tail pulleys, connected. 564.00
 Conveyor running between buildings,
 435 ft., at \$1.82 3440.00
 584 ft. interior framing, at \$1.25 1168.00
 1014 ft. idlers + idler bearings, at \$1.25 1267.50
 8 belts, at \$120.00 960.00 12360.80

— Motor. 40 H.P.

Motor Housing. 28 at \$20.00 each 560.00 560.00

Total ————— 156797.88

Magnetite Magnets.

160 sets of 3 high
 80 " " 6 "
 960 Magnets - 300 lbs. each -
 288,000 lbs., at 2. \$ 11 520.00
 Copper - 76,800 " " 20. 15360.00

Angle iron framework, chutes, etc.
 for the 160 sets of 3 high -
 176,000 lbs., at 2. 3520.00

Angle iron framework, chutes, etc.
 for the 80 sets of 6 high -
 407,560 lbs., at 2. 8147.20

Labour on 288,000 lbs. at 2. 5760.00
 " " 383,360 " 22 11,667.20

Labour, winding 960 Magnets, at \$1. 960.00
 \$ 36934.40 \$ 6934.40

- Motor. See motor list.

No erection

Hematite Magnets.

256 sets of 20 high.
 5120 Magnets 300 lbs. each.
 1,536,000 lbs., at \$ 61440.00
 Copper - 409,600 " , at 20 81920.00

Angle iron in framework,
 sheets in shutters, etc.
 1,020,416 lbs., at 2 20408.32

Labor on 1,536,000 lbs. at 2 30720.00
 " " 1,020,416 " at 2 20408.32

Labor, winding 5120 Magnets, at 20 10240.00
\$238136.64 \$238136.64

— Motor.

See motor list.

No erection.

Motors.

Hoist for Grusher Plant.	150 H.P.
First Set 5 ft. Roller.	60 "
Second	80 "
Third	100 "
Fourth & Fifth . . - 100 H.P. each	200 "
Top Roller Feed.	50 "
Bottom	10 "
Chute Taps.	10 "

6 Fine Grinding Rolls - 120 H.P. each 900 H.P.

- Drying House:	
Exhaustors. 2 - 25 H.P. each.	50 H.P.
Furnace Blowers.	15 "
Chucker Mechanism.	2 - 5 H.P. each 10 "
- Rock Stock House:	
Exhaust Fan.	25 H.P.
- Screen House:	
Roller Feeds.	6 - of 15 H.P. each 90 H.P.
- Blower House #1.	
Blowers. 16 - of 5 H.P. each.	80 H.P.
- Blower House #2.	
Blowers. 12 - of 5 H.P. each.	60 H.P.
Air Compressor, at mine.	130 "

4 Scraper Conveyors. - 25 H.P. each 100 H.P.
 All Belt conveyors - see list. 935 H.P.
 Motors — 3,030 H.P.

Light Dynamos.	120 H.P.
Phos.	3030 "
Magnetite Magnets.	75 "
Hematite	750 "
	<u>4,005 H.P.</u>

Large 4,000 H.P. Dynamo, at \$16.25 64,000.00
 3,000 . . Motors . \$18.25 54,000.00
\$118,000.00 \$118,000.00

24", 36" and 48" Belt conveyors.-

Head and Tail Pulley
for 24" Belt Conveyor.

Cast iron	2,350 lbs.	56.28
Steel shafting ($4\frac{1}{2}'' + 3\frac{1}{2}''$)	426 -	12.78
Bolts, nuts, etc.	135 -	3.71
Maple struts		2.70
Alum. Bars		48.00
2 - $2\frac{1}{2}''$ Bearings, complete, at	$\frac{1}{2}$ 28	24.56
2 - $3\frac{1}{2}''$	\$14.02	28.04

Trail Paddles.		
Cast iron.	1094 lbs.	27 30
Steel shafts.	237 "	7 11
Rollers, rods, etc.	100 "	2 75
Maple staves.		2 70
2-3/4" Bearings, complete, set #4.02		2 00
Labor on #2-58 lbs at 2.5		10 65
		54 94

Head and Tail Pulley
for 36' Belt conveyor. \$ 378.65

Head and Tail Pulley
for 48" Belt Conveyor. # 414.19

Above does not include
cost of erection.-

24", 36" and 48" Belt Conveyors.

Cost per lineal foot of 24"
including End Bearings, Angle Pieces,
Idlers and Vertical Idlers.

On 30 ft. length.

20-1½" shafts.	240 lbs. at 3.	7.20
40 Spindles.	360 " " 3.	10.80
40 Bearings.	360 " " 4.	14.40
Bolts and Pins.		8.60
Maple Staves.		7.20
Chains and Packing.		4.20
120 Oil Plugs.		6.00
Labor on 960 lbs., at 3.		28.80
2 Vertical Idlers.		
Cast Iron.	70 lbs. at 4.	2.80
Steel Spindles.	6 " " 3.	.18
Bolts.		.25
Cast Iron Blocks. 12 lbs., at 3.		.36
Labor on 88 lbs., at 4.		3.52
4 Plugs.		.20
		<u>\$87.61</u>

24" Say \$3.22 per ft.

36" " \$3.22 " " "

48" " \$4.22 " " "

Cost of erection not included.

2" Dumps in Belt Conveyors-

24', 36' and 48' Belts-

For 24' Belt:

1 Shaft-	168 lbs., at 3	\$ 5.04
Spiders-	220 " - 2 1/2	5.50
Bolts-		1.35
Maple - 65 ft., at \$30.22		1.95
2-2 1/2" Bearings, complete, at \$12.22		24.86
Labour on 388 lbs., at 2.5		9.70
		<u>\$48.10</u>
2 Shafts, etc. -		<u>\$ 96.20</u>

For 36' Belt:

1 Shaft-	220 lbs., at 3.	\$ 6.60
Spiders-	220 " - at 2 1/2	5.50
Bolts-		1.35
95 ft. Maple, at \$30.22		2.85
2-3 1/2" Bearings, at \$14.22, complete.		28.04
Labour on 440 lbs., at 2.5		11.00
		<u>\$55.34</u>
2 Shafts, etc. -		<u>\$110.68</u>

For 48' Belt:

1 Shaft-	265 lbs., at 3.	\$ 7.95
Spiders-	220 " - 2 1/2	6.25
Bolts-		1.55
125 ft. Maple, at \$20.22		2.75
2-3 1/2" Bearings, at \$14.22, complete.		28.04
Labour on 516 lbs., at 2.5		12.90
		<u>\$60.44</u>
2 Shafts, etc. -		<u>\$120.88</u>

9' Scraper Conveyors - Blower House.

1 Head and 1 Tail Pulley:		
Bron casting.	2,000 lbs., at 2 $\frac{1}{2}$	\$ 50.00
Shankels, single iron,		
sheet steel, etc. 2,935 lbs., at 2.		58.70
Shafting. 7.0 lbs., at 3.		21.30
Pin - 520 - " 2.		10.40
Gears.		120.00
2-2 $\frac{1}{2}$ " Bearings, at 12 $\frac{3}{4}$, complete.		24.56
4-3 $\frac{1}{2}$ " " " 14 $\frac{1}{2}$		56.08
Labor on 6267 lbs., at 2.		125.34
		<u>\$ 666.43</u>

9' Scraper Conveyors cost \$9 $\frac{22}{100}$ per lin.
ft., including rope, rope clamps,
clamp bolts, rollers, wheels, blades,
rail, etc. -

2 Conveyors in Blower House ¹ ,		
each 198 ft. long		
2 Head and 2 Tail Pulleys.	\$ 932.86	
Conveyor, 396 ft., at \$9 $\frac{22}{100}$	2793.68	

2 Conveyors in Blower House ² ,		
each 154 ft. long		
2 Head and 2 Tail Pulleys.	932.86	
Conveyor, 308 ft., at \$9 $\frac{22}{100}$	2950.64	

2 Motor Drawings, at \$20 $\frac{00}{100}$

40.00	
\$ 8,650.04	\$ 8,650.04

Motors - see motor list.

Dryer House-

2 Dragers:

Plates in sides, etc., bottom chute, furnace castings, choker and distributor plates. 285,000 lbs., at 2.	\$ 2700.00
Castings, machined. 2,240. - 2.	306.00
Machine work 12,240. - 2.	367.20
Sheet steel and angles. 19,520. - 2.	390.40
Labor on same. 19,520. - 2.	390.40
Shafting- 8,636. - 2 $\frac{1}{2}$	237.69
Machine work- 8,636. - 2.	259.08
Stack and tank steel- 17,000. - 2.	340.00
Labor on same- 17,000. - 2.	340.00
Rope clamps- 150. - 2.	4.50
Labor on same	10.00
12 Screens.	36.00
Bolts.	267.86
Castors in joints.	54.00
2 Dust Chutes, with stack & chks. 9000 at 2.	180.00
Labor on same. 9000 lbs. at 2.	180.00
2- 80' Exhaustors. (Buffalo)	410.00
1 Blower for Furnace.	110.00
2 Pyrometers, with fittings.	100.00
44,000 Fire Brick, at \$2.35	1012.00
25,000 Red " " \$2.25	200.00
Foundation Bolts. - 260 lbs., at 3.	16.80
Firing tools.	18.00
	<hr/> \$ 10929.93
5 Dust Drawings for Motors, at \$2.25	100.00
	<hr/> 100.00
	<hr/> \$ 11,029.93

Erection.

— Motors. see list.

- 2 - 25 H.P. for exhaustors.
- 1 - 15 H.P. " blower for furnace.
- 2 - 5 H.P. " shaker mechanisms.

Rock Stock House.

1 Panel:

7 Chutes, with Gates, at \$40.00

\$280.00

3 Panels -

\$840.00

Erection.

Furnace for Rock Stock House:

Castings - 5,000 lbs. at 24¢ \$125.00

Bolts, rods, etc. 400 " " 2. 8.00

20,000 Red Brick, at \$8.00 160.00

4,000 Fire " " \$23.00 92.00

Firing Tools. 12.00

Exhaust Fan.

\$80.00

847.00

Duct Housing, for Motor.

20.00

\$1707.00

— 1.25 H.P. Motor, for Fan.

See motor list.

Erection.

Grinding House-

6 Sets of Fine Grinding Rolls-

1 Set of Rolls-Machine proper-		
Gray Iron Castings- 67,035 lbs. at 24	1676.38	
Shuffled Plates- 2,968 - - 33	96.46	
6 Flacing Rolls- 7,030 lbs. at 110.22	660.00	
Bronze Castings- 878 lbs. at 22	193.16	
Brass 25 - - 22	5.50	
Hammered Iron Shafts- 15324 - - 45	689.58	
Steel Shafts (3 1/2") 140 - - 3	4.20	
P. & Q. Special Ballitt- 845 - - 26	219.70	
Steel keys, turned bolts etc. 1130 - 3	33.90	
Bolts, rods etc. 710 - 23	19.33	
	<u>\$ 3598.41</u>	
Labour on 96,129 lbs. at 22	4998.50	\$ 8596.91
Foundation plates- 12,260 lbs. at 2 1/2	337.15	337.15

Tightening Devices:

Gray Iron Castings- 3,868 lbs. at 24	\$ 96.70	
Bronze 180 - - 22	39.60	
Brass 9 - - 22	1.98	
Steel Shafts (3 1/2") 225 - - 3	6.75	
32 ft. 9" Channels } 571 - - 3	11.42	
28 - 4" - - - - -		
Steel keys, dowels, etc. 30 - - 3	.90	
Bolts, rods, etc. 263 - - 2 1/2	7.33	
	<u>\$ 164.38</u>	
Labour on 5146 lbs. at 22	267.59	\$ 432.17
350 ft. Nine Rope, at 12	42.00	
	<u>\$ 9408.23</u>	
6 Rolls----		<u>\$ 56,449.38</u>

Grinding House.

6 Sets of Fine Grinding Rolls.

Each mechanism, and shafts above and below rolls, for 1 set:

Cruciform Castings	1762 lbs., at 2 1/2	\$ 44.00
Rolls	58 " " 2 1/2	1.89
Bronze	9 " " "	1.98
Steel Shafting (2 1/2)	216 " " "	6.48
50 ft. 6" belting.		
12 " 6"	2208 " " "	44.16
Angles & Steel Plates.		
Steel keys, turned bolts etc.	11 " " "	.33
Bolts, nuts, rivets etc.	178 " " 2 1/2	4.90
Approach and Chains.		13.00
4 " 2 1/2" Bearings complete.	at \$10.22	40.92
Labor on	44 + 2 lbs., at 4	177.62
		\$ 234.79

2008.74

6 Rolls.

6 Fine Grinding Rolls, including tightening mechanism, shafts above and below machine, feed rolls, and feed roll mechanism:

\$ 58,458.12

6 Motor Housings. at \$20.22

120.00

\$ 58,578.12

— 6 Motors each 150 H.P. see list.

Creation.

Screens.-

1132 screen plates, arranged in
6 groups. Each group containing 32
plates and each plate 4' x 2'
6 high - making 192 sets.

Cast iron hoppers and gates above
screens for roller feed - 192 in number
hoppers 8'0" long - 370 lbs. each - (no
machine work) - 71,040 lbs. at 25¢ 1776.00
1344 ft. 10" pipe at 4¢ less 607¢ (33,760 lbs) 2419.20
192 G.D. pipe ends. 3,840 lbs. at 25¢ 96.00
36 " " stands. 2,880 " " 25¢ 72.00
660 ft. 2 7/8" shafting. 10,464 " " 25¢ 260.70
6 sets of pump timing, at \$36.00 216.00
48 " Motors " " \$10.00 480.00
180 - 2 7/8" Bearings, at \$10.00, complete. 1814.40
Chutes above and below each group
of screens of 1/4" sheet iron in the
form of 21 pipes:
4870 - 6 59,200 lbs. at 2. 1184.00
1132 Screens, at 50 cents each 576.00
Screen Frames. 46,080 lbs. at 2. 921.60
Screw bases. 190 lbs. at 2. 9120 " " 25¢ 228.00
240 " - 6. 1,440 " " 25¢ 36.00
Labor on 10,360 " " 2. 316.80
176,208 " " 2. 3524.16

6 Direct Drivings for Motors, at \$15.00

9000

\$ 14011.26 \$ 14011.26

6-15 H.P. Motors - see motor list.

No erection

Blower House #1.

32 Blowers:

For 1 Blower:

Sheet Steel & Angles.	1411 lbs. at 2	\$ 28.22
Blades.	335 . . . 2	6.70
Castings - Blade Centers.	108 . . . 25	2.70
Plate - Sheet Steel.	579 . . . 2	11.58
Bearings - 3 at \$7.25		35.00
Brackets - Cast Iron.	180 . . . 25	4.50
Hanger - " " " 70 " " 25		1.75
Gears.		20.58
Gear Cases - Cast Iron.	40 . . . 25	1.00
Steel.	310 . . . 2	6.20
Shafting.	180 . . . 2	5.40
		\$ 123.40
Labor on 3213 lbs. at 2.		96.39
		\$ 219.79

1 Bin:

Sheet Steel & Angles.	1585.2	
" " " Air Pipe.	1016.2	
" " " Ast. Blowers.	650.2	
" " " Chute Sides.	1609.2	120.00
" " " " "	40.2	
" " " Hopper.	590.2	
Cast Iron Connections.	175.25	
Hopper.	370.25	
Sheet Steel & Angles at each 5' drop.	500.2	15.50
Cast iron at each "5"	75.25	
120 gals. sheeting, at	1	9.60
Labor on 6613 lbs. at	3	198.30
		\$ 343.40

1 Bin, Blower, Air Pipe and
Connecting Chutes - \$563.19

32 Bins, etc.

16 Motor Houseings, at \$15.25

\$18022.08

240

\$18,262.08

- 16-5 H.P. Motors - see motor list.

Erection -

Blower House #2.-

24 Blowers:

1 Bin, Blower, Air Pipe and
Connecting Pipes. #562.19

24 Bins.

13,516.56

12 Motor Houseings, at \$15.00

180.00

# 13,696.56	# 13,696.56
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- 12.5 H.P. Motors - see motor list.

Erection.

Bearings=

Standard, with Oil Pockets & Collars=

2 $\frac{7}{16}$:			
Cast Iron, 75 lbs. wt	3	\$ 2.25	
Babbitt - Special, 3 lbs. wt	30	90	
Steel downh pins - 1 lb.	10	10	
N. D. Bolts - 6 lbs. wt	4	24	
1 Chain.		06	
Packing.		00	
3 Pipe Plugs, wt	5	15	
Labor - \$3.62 nett, add 40% + 25%		6.73	\$ 10.08

2 $\frac{1}{2}$:			
Cast Iron, 116 lbs. wt	3	\$ 3.48	
Babbitt - Special, 4 lbs. wt	30	1.20	
Steel downh pins - 1 lb.	10	.10	
N. D. Bolts - 9 lbs. wt	4	.36	
1 Chain.		.09	
Packing.		.08	
3 Pipe Plugs, wt	5	.15	
Labor - \$3.95 nett, add 40% + 25%		6.82	\$ 12.28

3 $\frac{1}{2}$:			
Cast Iron, 136 lbs. wt	3	\$ 4.08	
Babbitt, 6 lbs. wt	30	1.00	
Steel downh pins - 1 lb.	10	.10	
N. D. Bolts - 11 lbs. wt	4	.44	
1 Chain.		.10	
Packing.		.10	
3 Pipe Plugs, wt	5	.15	
Labor \$4.12 nett, add 40% + 25%		7.20	\$ 14.02

1 $\frac{1}{2}$:			
Bearing, complete, on above prices -		\$ 7.00	\$ 7.00

Dunderland - Summary.

12-20-01.

Structural Work - Houses:

Crusher House.	85 tons.
Binders in Crusher House.	82 "
Traveller Approach & Extension.	102 "
Dryer House.	106 "
Rock Stock Hs. & Furnace Hs.	143 "
Fine Grinding House.	198 "
Screen House.	295 "
Blower House #1.	210 "
Magnetite Separator Hs.	435 "
Hematite " "	530 "
Blower House #2.	162 "
(15,000 tons capacity) Concentrate Stock Hs.	125 "
Coal Stock House.	40 "
Engine House.	80 "
Roller " "	80 "
Store House.	60 "

2730 Tons erected at \$75.22 \$204,750.00 \$204,750.00

Corrugated Covering 18" x 24" 51,357.00

Excavation - 20,626 cu. yds., at \$2.52 51,571.50

Dry Wall. 2800 cu yds., at \$1.52 4200.00

Concrete. 3,505 cu yds., at \$2.82 103,150.00

Heavy Masonry } 8800 cu yds., at \$2.22 14,500.00 55,753.50
Crusher Plant }

Carried forward \$290,502.50

Dunderland Summary.

12-30-01-

Brought forward.

\$290502.50

Machinery:

Crane Rolls, 7' x 7'

5 sets 5' x 5' Rolls.

Horse.

Tipping Mechanism.

Roller Belts.

Hoppers.

Steam Plant for Driving

Crane Rolls - 150 H.P.

Crushing

Plant.

\$69221.50

3000.00

Drying House.

11029.93

Rock Stock House.

1707.00

Fine Grinding Rolls.

58578.82

Screen House.

14011.26

Blower House #1.

18262.08

Magnetite Magnets.

56934.40

Hematite

235136.64

Blower House #2.

13696.56

Belting - Conveyors to Conveyors

1500.00

Belt & Scraper Conveyors,

165447.39

including runways & belts.

Motors. 3000 H.P., at \$18.22

54000.00

Engines. 4000 . . . \$16.22

64000.00

Steam Plant. 4000 H.P.

140000.00

Siding System.

2000.00

Heating

8000.00

Electricity

18000.00

Conveyors to Dumps (2)

2500.00

4 Steel Shovels, at \$10,000.00 each.

40000.00

35-36" Rock Drills, at \$250.00 each.

8750.00

Nine Sump Pumps.

3000.00

50 Mine Lamps, at \$160.00 each.

8000.00

50 . . . Lamps, at \$175.00

8750.00

Two Air Compressors (Motor-driven)

6000.00

Small Machine Shop.

2500.00

Erection of Machinery, 2 to 4 per lb.

9712.240

\$1097,148.48

1097,148.48

Total.

\$1,097,148.48

Mr. Edison:

On this estimate for the Dunderbond Plant I have been guided as far as possible by the cost of similar material furnished to Stewartville taking also where possible the actual cost of machine work at Stewartville, adding to same 40% + 25% as set forth in detail in sheets herewith.

The Conveyor Runways have been calculated at 5 cents per pound erected, allowance being made for a walkway on one side of conveyor belt only.

Five Grinding Rolls are figured at cost as built in Laboratory. Vibrant Crushers, 5 ft. Rolls, Hoppers, etc in Crusher Plant are figured at 5 cents per pound, complete, but not erected.

Structural Work (Houses) is figured at \$75.00 per ton erected, and similar houses at Stewartville taken as a basis of calculation - 12 1/2 % of being added to same.

The amount added for erection of Machinery in houses I have put at \$97,125.00, which is 1/2 cent per pound.

No allowance has been made for freight, duties, lumber in stairs & floors, & tracks in the Plant proper, coal handling from R.R. to coal store, & water for boilers and engines.

This estimate is based on handling 5000 tons of crude ore every 20 hours, & has not in view future extensions. No separate Stock House has been provided for Magnetite Concentrate, as under the plan it mixes with the Hematite Concentrate before entering the Blower House on its way to the Stock House.

Should say this plant could not be erected for less than \$1,400,000.00 -

Brigetting Plant - Mo.

61
12/21/01-

Conveyors:

#1. Car Dump to Stock House:

36" Belt, 800 ft. c. to c., incl. ht. 56 ft.	
12 1/2 ft. of 36" Belt, at \$2.22	2430.00
2430 . rubber edging at 14¢.	363.50
Head and tail pulleys, etc.	378.65
Conveyer running between buildings,	
+ 24 ft., at \$9.88	4070.04
Interior framing, 176 ft. at \$2.22	422.40
Idlers, idler bearings, etc. 600 ft. at \$1.10	2160.00
5 Bents, at \$12.00	600.00
1 Travelling Trippe	680.00
	11105.98

— Motor - 75 H.P. (500 tons per hr.)

#2. Belt under Stock House:

36" Belt, 250 ft. c. to c., level.	
513 ft. of 36" Belt, at \$2.22	1030.00
1030 . rubber edging, at 14¢.	124.80
Head and tail pulleys, etc.	378.65
Interior framing 250 ft. at \$2.22	600.00
Idlers & idler bearings 250 ft. at \$3.60	900.00
	3063.15

— Motor. 20 H.P.

#3. Stock House to Dryers

36" Belt, 550 ft. c. to c., incl. ht. 25 ft.	
715 ft. of 36" Belt, at \$2.22	1430.00
1430 . rubber edging, at 14¢.	214.50
Conveyer running between buildings,	
+ 324 ft., at \$9.88	3216.00
Interior framing - 15 ft. at \$2.22	36.00
Head and tail pulleys, etc.	378.65
Idlers, bearings, etc. 350 ft. at \$3.60	1260.00
7 Bents, at \$12.00	840.00
	7372.15

— Motor - 40 H.P.

(300 tons)

Carried forward

21844.25

(4)

Brigetting Plant - Mo.

Brought forward

\$ 21544.25

#4 Scraper Conveyor - Dryer to Mixer:

110 ft. Centre to Centre -

Head and tail pulleys

\$ 466.43

Entire framing, 110 ft. at \$3.22

418.00

110 ft. Conveyor, at \$9.58.

1053.80

1938.23

- Motor - 20 H.P. -

#5 Return Belt to Bin at Dryer:

24' Belt, 115 ft. c. to c., vert. ht. 12 ft.

245 ft. of 24' Belt, at \$1.22

\$ 300.25

490' rubber edging, at 15¢.

73.50

Head + tail pulleys, etc.

349.94

Entire framing, 115 ft. at \$2.22

250.00

Idlers + idler bearings, 115 ft. at \$3.22

345.00

1804.69

- Motor - 20 H.P. -

#6 Mixer to Cooler:

24' Belt, 165 ft. c. to c., 25 ft. vert. ht.

344 ft. of 24' Belt, at \$1.22

\$ 431.25

690' rubber edging, at 15¢

103.50

Head + tail pulleys, etc.

349.94

Running det. bldgs. - 40 ft., at \$8.22

560.00

Entire framing, 95 ft. at \$2.40.

228.00

Idlers + idler bearings - 165 ft. at \$2.22

495.00

1 Belt.

120.00

2287.69

- Motor - 20 H.P. -

#7 Cooler to Brickery

24' Belt, 40 ft. c. to c., vert. ht. 8 ft.

95 ft. of 24' Belt, at \$1.22

\$ 111.75

190' rubber edging, at 15¢

28.50

95' entire framing, at \$2.22

228.00

Head and tail pulley, etc.

349.94

Idlers + idler bearings, 40 ft., at \$2.22

120.00

848.19

- Motor - 10 H.P. -

brought forward

\$ 27920.05

Brigetting Plant - No.

12/21/1901.

Conveyors.

*1. Con. Dump to Stock House.

36' Belt, 600 ft. c. to c., vertical height 50 ft.
12 1/2 ft. of 36' Belt, at \$2.25 2430.00

2430' rubber edging, at 12 cts. 291.60

Head and tail pulleys, etc. 370.00

Conveyer running between buildings:

424 ft., at \$1.95 826.80

Interior framing 176 ft., at \$2.25 396.00

Idlers, idler bearings, etc., 600 ft., at \$2.25 1350.00

5 Bents, at \$120.00 600.00

1 Trussing Triflex. 610.00 11108.90

— Motor. 75 H.P. (300 tons per hr.)

*2. Belt under Stock House.

26' Belt, 240 ft. c. to c., level.

515 ft. of 26' Belt, at \$1.25 643.75

1030 ft. of rubber edging, at 12 cts. 123.60

Head and tail pulleys, etc. 349.94

Interior framing 280 ft., at \$2.25 620.00

Idlers, idler bearings, etc., 280 ft., at \$2.25 620.00 2398.19

— Motor. 20 H.P.

*3. Stock House to Dryer.

24' Belt, 350 ft. c. to c., vert. height 80 ft.

715 ft. of 24' Belt, at \$1.25 893.75

1430 ft. of rubber edging, at 12 cts. 171.60

Conveyer running between buildings:

335 ft., at \$1.85 618.75

Interior framing, 135 ft., at \$2.25 303.75

Head and tail pulleys, etc. 349.94

Idlers, idler bearings, etc., 350 ft., at \$2.25 787.50

7 Bents, at \$120.00 840.00 6058.19

— Motor. 30 H.P. 130 tons.

(4) carried forward 19562.33.

Brigetting Plant.-Mo.

Brought forward-

\$ 19562.33

#4 Scraper Conveyor. Dryer to Mixer.

110 ft. Centre to Centre:

Head and Tail Pulley, etc.

\$ 466.43

Interior framing, 110 ft. at \$3.22

416.00

110 ft. conveyor, at \$9.22

1053.80

1938.23

- Motor - 20 H.P.

160 tons-

#5 Return Belt to Bin at Dryer:

24' Belt, 115 ft. c. to c., rest height 15 ft.:

245 ft. of 24' Belt, at \$1.22

306.25

490 ft. of rubber edging, at 15 cts.

73.50

Head and tail pulleys, etc.

349.94

Interior framing, 115 ft. at \$2.22

250.00

Idlers etc. 115 ft. at \$3.22

343.00

1904.69

- Motor - 20 H.P.

160 tons-

#6 Mixer to Cooler:

24' Belt, 165 ft. c. to c., rest ht. 25 ft.:

345 ft. of 24' Belt, at \$1.22

411.25

690 ft. rubber edging, at 15 cts.

103.50

Head and tail pulleys, etc.:

349.94

Runway bet. idlers, 70 ft. at \$3.22

560.00

Interior framing, 95 ft. at \$2.22

190.00

Idlers & idler bearings, 165 ft. at \$3.22

495.00

1 Paint.

120.00

2249.69

- Motor - 20 H.P.

125 tons:

#7 Cooler to Discharge:

24' Belt, 40 ft. c. to c., rest height 8 ft.:

95 ft. of 24' belt, at \$1.22

115.75

195 ft. of rubber edging, at 15 cts.

28.50

40 ft. interior framing, at \$2.22

80.00

Head and tail pulleys, etc.

349.94

Idlers & idler bearings, 40 ft. at \$3.22

120.00

697.19

- Motor - 10 H.P.

(2) Carried forward \$ 25752.15

Brigetting Plant.. Mo.

Brought forward.

\$ 23 752.12

*8 Scraper Conveyors over Brickers:

2 - each 300 ft. c. to c. -

2 Head and tail pulleys, etc.

Interior Framing, 600 ft. at \$3.00

600 ft. Conveyors, at \$9.50

932.86

2280.00

5748.00

8960.86

— 2 Motors. 30 H.P. each - 60 H.P. -

*9 Return Belt under Brickers:

24" Belt, 400 ft. c. to c., rest ht. 13 ft. -

8 1/2 ft. of 24" Belt, at \$12.25

1018.75

1630 ft. rubber edging, at 15 cts.

244.50

Head and tail pulleys, etc.

349.94

Runway between bldgs., 80 ft. at \$8.00

640.00

Idlers & idler bearings, 200 ft. at \$3.25

650.00

1 Rest and Transfer Tower.

648.00

4738.19

Interior framing. 320 ft. at \$2.00

640.00

— Motor. 15 H.P. -

40 tons.

*10 Return to Scraper above Brickers:

24" Belt, 100 ft. c. to c., rest ht. 15 ft. -

2 1/2 ft. of 24" Belt, at \$12.25

168.75

430 ft. rubber edging, at 15 cts.

64.50

Head and tail pulleys, etc.

349.94

Runway between bldgs., 80 ft. at \$8.00

640.00

Interior framing, 20 ft. at \$2.00

40.00

Idlers & idler bearings, 100 ft. at \$3.00

300.00

1 Rest —

120.00

1783.19

— Motor. 15 H.P. -

Brought forward.

\$ 41234.57

Briguetting Plant - No.

Motors:

Furnace Dime (Duckets in Oven)	50 H.P.
8 Mixers.	20 H.P. each.
Screw Conveyors at Mixers.	160 "
	25 "
72 Bricks etc.	40 "
Exhausters for 36 Furnaces.	54 H.P. each.
Furnaces Belovues.	180 "
	60 "
Exhausters top of Dryers.	10 "
Fan House.	20 "
Self feeders. Binder House.	15 "
Foundry.	10 "
Machinal Sh. p.	75 "
Smiths Shop.	10 "
Quilt & Conveyors.	225 "
Bucket Conveyors back of Furn. m.	25 "
" " to Bin House.	30 "
" " over Dime.	40 "
	1025 H.P.

1035 H.P. Motne, at \$18.22 per H.P.

18,630.00

1035 H.P. Generator. Power. }
100 - - - - - Light. } at \$16.00

18160.00

Heating and electric appliances:-

7000.00

Oiling system.-

1000.05

Brigetting Plant: Mo.

Summary:

Structural (Houses):

Mixer House.		55 tons.
Muck	"	32 "
Dryer	"	87 "
Stack	"	138 "
Engine	" (5000 tons cap)	66 "
Boiler	"	66 "
Foundry & Forge		39 "
Brick & Oak House.		413 "
		<hr/> 916 tons.

916 Tons, at \$75⁰⁰ per ton erected - \$ 68,700.00

Corrugated Iron, Windows & Doors. - 20,437.00 \$ 39,137.60

Excavating, 8677 cu yds., at 23⁰⁰ - 2169.23

Dry Walls, 767 " " " \$1⁰⁰ 1135.50

Concrete, 2170 " " " \$3²⁵ 6510.00 9814.73

Machine Shop, Office and Store,
Oil House. - Wood, covered
with corrugated iron. } 16,000.00

Oil Store. 600.00

1035 H.P. Motors, at \$18⁰⁰ 18630.00

1135 H.P. Generators, at \$16⁰⁰ 18160.00

Mining & Electric Appliances. 7000.00

Oiling System. 1000.00

Heating " 400.00

(18) carried forward. \$164,341.73

Brigetting Plant - Mo.

Summary:	Brought forward—	\$164,341.75
Scraper & Belt conveyors—		41,234.27
3 Bucket conveyors.		12677.54
concentrate Duff under bars.		10400.00
72 Brickers, at \$1000.00 each—		72000.00
36 Ovens, including furnaces, convey. in ovens, etc.—		48892.68
Steam Plant, 1200 H.P.		41000.00
8 Mixers, Complete Kettles.		30240.00
		1500.00
36 Exhausters, with drive and pipe connections.		6600.00
1 Large Blower.		300.00
1 Dryer, with exhauster, etc., complete.		4860.00
Equipment for Machine Shop, Smith Shop, & Foundry.		15000.00
Erection—		22652.29
Total		<u>\$463,339.73</u>

7 Legs	58 888	
2 Dies -	59 25	
2 Binders -	47 575	
2 Dies -	62 50	
Bolts for the above	370	978 20
4 Pillow Blocks	46 356	
4 Bushings	40 92	
2 Filler Pipes -	63 08	
4 Green Cup Covers	456	
4 " " Saddles -	160	
Bolts for Bushings	1600	
Bolts for Bolting & Binders	660	59 432
2 Mandrell without Shafts	59 240	
Plates for 2 Rolls	24 290	
Bolts for Plates	1374	54 904
2 Pulleys -	11 550	
2 Frictions Complete	4 250	
Bolts for Pulleys	200	16 000
2 Shafts	16 690	
4 Bolts	59 16	
16 Nuts for same	19 39	
8 Washers -	168	24 783
2 Thrust Bearings	10 62	
4 Inside Oil Casings -	605	
2 for Pulley ends	220	
Bolts for Thrust Bearing	140	
Bolts for the above	240	22 67
Steel Hopper	24 358	
2 Steel Chuk Plates	97 37	24 487
Total		309 243

2/2/77 2

304293

Roller Feed.	
3 Sections.	
2 Bearings.	8400
1 Worm Casting	740
Brackets and Caps	270
1 Worm Wheel and Worm	325
1 Pair of Miter Gears	755
4 Spld. Collars	110
2 3/4 Pillow Blocks	360
2 2 1/2 "	
1 Feed Roll Shaft	1310
1 Worm shaft.	75
1 Rock Shaft.	100

Still Frames over Rolls. 40794 362793 pounds.
Total Weight.

Pillow Blocks.	57432
Wand rolls.	84904
Bulley.	16000
Shaft & Bolls.	24783
Stem Bearing, -	2267
	157386

Castings for Giant Path *Exhibit 17.*

Foundation Castings.

4 Legs. Pat. Nos. 1-1558	9400#	
1-1557	9475	
1-1556	9675	
1-1555	9650	
	38200#	
Price - of Castings		\$820.20
Machine Work on Same		110.00

1 Cross in North Side Pat. 1552 - 2700#	
1 " " " " 1551 - 2425#	
1 " " " " 1554 2397#	
1 " " " " 1558 2360#	
2 - Girder Ends	2350#

Price of Castings	1471.00
Machine Work	300.00
from Bill of Charging. Rev. Co.	

40 Foundation Plates Pat. 1567	4200#	
Price		71.40

2 Chucks Pat. 1244	9737#	422.55
--------------------	-------	--------

Steel Hopper.

1. Steel Casting. Pat. 2854	7760#	
1 " " " " 2855	7760	
1 " " " " 2852	7230	
1 " " " " 2853	7600	
		\$1288.55

2 Pillow Block 1014	46156	
2 " " 1520	4092	
2 " " 1015	6308	
7 Grease Cup Sockets 1018	160	
4 " " Covers 1017	456	

Machine Work

1257.78
571.72

2 Hurst Bearing	978#	
2 " " " " 114		
4 Oil Packing -	605	
2 Oil Packing - for Pulley	220	42.25
Machine Work		31.25

(2)

2- Pulleys. 11550*

2 Spiders for Friction* 2994 2000* 85.00
 # Friction Ring. *2995 1860 15.10
 Macfish Work- 77.29
 1. Idler Pulley. 487.29 775* 31.40

2 Friction Bands Complete.

2- Mandrels 59240 13.03 28
 32 Regular Plates } 20320 }
 4 Slugger " } 2728 } 857.08
 7 Blank " } 1240 }

Mach. Work on Mandrels 495 24
 " " " Plates 760.

288. Bolts for Regular Plate 216.00
 16 " Slugger 13.60
 Weight of English Work 125# 27.05
 304 Washer for Bolts 90# 2.25

Forgings -

(3)

2 16" x 13-1/2" Shaft. 183.20* 703.20

2 Short Jenson Bolts	}	756.2*	667.32
2 Long "			
16 Hex Nuts			
8 Washers			

40 Foundation Bolts	3980*	79.60
50 Sq. Nut.	160	16.20
50 Hex Nut.	124	16.20

707 Bracing Bolts.
58 Circular & Laga Bolt & Nuts

8 Short Yellow Black Bolt & Nut.	}	677*
8 Long		

30 Bolts for Steel Hopper 126*

1 Bell End Shaft 6 7/8 x 12 1/2	1318*	58.95
1 Bell End Shaft 3 1/2 x 12 1/2	165	}
1 Worm Shaft	75	
1 Girth	100	
1 Girth Shaft	85	
		15.58

Steel Floor Beams over Ralls. (4)

Carnegie Steel Co.

2 Angle Brackets

40744#

\$88.56

29.00

Roller Feed over Ralls

3	Castings - 3025	8700	144.00
2	Bearing " 1657	790	132.50
2	Caps 1657H		19.75
	Machine Work - Bearing -		4.20

1	Worm Casting # 2521	270*	
2	Caps - 1917	82	
2	" 2520	70	
2	Brackets 2522	124	12.40
	Machine Work -		7.44

1	Worm Wheel	610	
1	Worm -	145	95.00
1	Pair of Miter Gears -	110 -	25.00
4	Spoke Collars -	360	9.00
	Machine Work -		7.20

1 -	18" Hill Friction Clutch -		30.00
1	20" Pulley		12.00
2	3 1/2" Pillow Blocks -		15.20
2	2 1/2" " "		10.00
	Composition Washers -	16 -	5.12
	Machine Work -		1.25

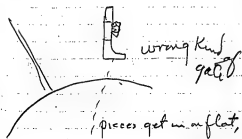
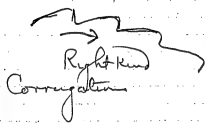
**Edison Ore Milling Syndicate, Ltd., and Related Companies
Standard Construction Corporation, Ltd.
Pocket Notebook (1902-1904)**

This pocket notebook was used mainly by Edison, probably during the period 1902-1904. Included are notes and drawings pertaining to the design and construction of the iron concentration plant at Dunderland, Norway, and to operations at Edison's cement works in Stewartsville, New Jersey. Many of the pages contain references to Edison's correspondence with William Simpkin, chief engineer of the Standard Construction Corp., Ltd. The flyleaf is inscribed "Sketch & rough notes for Simpkins." The cover is marked "Simpkins." The pages are unnumbered. Approximately 50 pages have been used.

WM. HARK CO.,
STATONERS,
80 MADISON LANE,
NEW YORK.
No. 11

Sketch & rough
Notes for Dimpkins

Roller feeds.

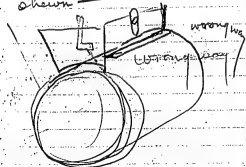


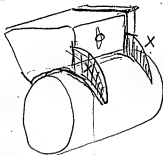


Right Kind of
guts
Rounded



only an edge should be
used ~~a~~ that rounded as
shown —

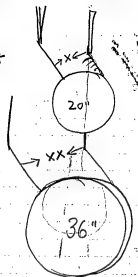




Right way

As feeds are now made after
one leaves the gate it slides
off on the side when gate
very much open. We
put check pieces X X
Extension this prevents
going off sides

X is so
narrow it
chokes



XX is
choke

Can feed more with lower
speed if the lower the speed
the more open the gate
the more nearly does it
feed the theoretical amount

~~from~~ the belt bringing
returns from Dryer to
Crusher should have
only such a speed as
will give no more than
1 or $1\frac{1}{2}$ inches of return
over whole width of belt
& reduce the speed to
do this so a man can
be stationed at belt
to act as a picker for
batts, spikes, drill heads
etc, otherwise a link
or pin will continue
going the rounds till
worn out — the returns
will be greater in the soft
winter than summer
on account of ice &
mud making screening top
dryer bad —

The position size and
whole arrangement of the
funnel at Dryer is good
can't be improved but
Dries the wettest kind of
ore perfectly —

Regular push buttons
off a pile in mill from
dust etc we have
a one that works well
in dust - you can order
a sample any time —

The pyrometer should be
placed in the box at the
highest intake at one
corner farthest from
intake and read 600
when ore is passing.

on the opposite side of
each intake box at
Dryer the door should
have a hole cut in
with a slide on outside
where a strip of mica
can be slid in & easily
withdrawn to clean —
The flame can be seen
& in case of a block
it can at once be seen
between what sections
the block is —

The speed of the fan is
_____ on top
of Dryer —

Dont forget the water for
bearings of Exhaustor.
top Dryer gets very
hot —

Wood must not come
within 3 ft of dryer
at floors - no wood
should be used on floor
where fan is, one smoked

Motor driving conveyor from
crushing plant should
get outside air into
gummy chambers
double exhaust fan below

Gummy chambers are
a great success -

Our bell system of
having a number of bells
throughout each section
of plant is very new
when we start up & shut
down no good we had

to adopt a distinctive
whistle on each plant
as at Edison - any man
Can ring bell in Engine
room & Engineer answer
by a whistle repeating
the signal -

~~The~~ Signals were changed
here supposed to be an
improvement had to be
changed as used at Edison
in fact most things changed
or improved upon thought
to be better had to be given
up - the Edison device or
method used

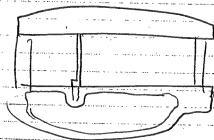
The ~~1~~¹/₂ inch screen
gave stuff unnecessary
fine & too much returns
was changed to 3/4 inch in
screens top dryer - this gives

about $1/2$ inch stuff ~
think you should use
one inch screens, don't
use any thicker sheet
than $1/16$ thick if thicker
is used its capacity goes
down —

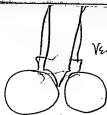
Carbon brushes should be
ground to the same radius
as the commutator
otherwise sparking on
vectors. The Ringman
Motor brush is not allowing
excess without they are
eased up in the center
the Carbon ground to the
radius of the commutator
then fast right they
give for a long life.
They are very much

more complicated than
Yard Eels which we
have here + appear not
better if as good before
you close for Nations with
Penguin or any body
else. Especially Penguin
let me see the specifications
they are shy on something
+ are no good in a mill
where they receive no
attention whatever.
with their present bearings
the bearings we put on
with the new change are
all right with work +
no felt. I do not believe
there is a water wheel
that is suitable for mill
purpose that is as good
as ours with present
Reservoir bearings. ||

Don't have a dead
 end to a tunnel
 under a stock house
 have opening at both
 ends for ventilation
 Motors & machine
 rusts, Motors get wet
 Etc.



3 shutters
 large pieces
 on 3 High



Very smooth under
bridge

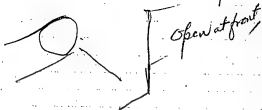
3 High -

All belts have Rubber
angles -

~~One use one inch screen
shot across 4 screens
under 3. as below if
not too~~

Exhaust top. Dryer pipe
heavy now $\frac{1}{4}$ - lagged
gets very hot iron floor
plenty twine windows

Water Cooled bearings -

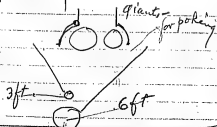


Roller feeds in
Dundell's Block
houses not neces-
sary use chutes & Control
Speed of Belt by
Dynamo + Motor

Drawn Trith of plate
after 5 sends sketch

2 top floor of Dyer
should be all windows
all sides
Other floor more
windows

Windlass + ratchet for
raising doors of
Rolls





Rock stock -

7.28

Must have return belt
from Dryer bringing
spalls back go slow
enough for picker man

1. Screen Higher might be
an advantage -

Links and Shaker +
improved safety Catch
on Feeder + Mount Coll.

Open up Dryer bldg
on account heat,

Blower motor on
Furnace Rock stock

Only Chutes under
stock House. Stop &
start belt,
Bell to ring more
or less w/ at
head pulley -

All Chutes open
place for man to stand
to clean screens -

36" Roll or rather 5 ft
roll happens so easily
Clean out ore when
stalled -

Winding to raise
doors -

Blowers, Mount
Baffle plates on a
separate fixture &
slide in side etc
this permits adjustment
Roll hanger.

all roller feeds driven
from four 6 feeds on
one motor with chance
to change gears also.
on end of the long four
shaft drive roller feed
shaft by sprocket pinion
a change of gears -
flaps over mouth.

All Bingham Malon
have one pair of
brushes under

The arms that
Extend out, the will
Must be shut down
if any particular
Brush under the arm
has to be fixed. This
is Hell—

Explain to
Rotten Worm &
Special Worm &
Cusumon

Roller feed st 36
all spur gear
Train ~~same giant~~
~~dump fall~~

~~no worms~~
If possible have
no pinion at bottom
of a gear as
gear casing
holds no belts

Open off -
all gears below
50" dia Cast Iron

and arrange to have
same faces as near
as possible to save
multiplied patterns

All previous
pages sent
in letter 104 -

also letter 5 about
filled plates + new
proposed shearing
device sent in 46

not in letters 6
put it in letter -

Small air compressor
gear motor driven -

Hard to plane out both
sides middle rock 3 &
Couldnt start,

Had put Hill starting
chitch -

Drums Little air Gauge gear pump

Walkway + ground
over roped ^{Holes} ^{and steel}

flooring with cracks
ng - either a deep
width or thin row
on wood concrete block
Lapped -

Letter No 6 explain
all above except - brackets,

Hoppers below grant can be
of $\frac{1}{2}$ to $\frac{5}{8}$ sheet and
also being walked by enough
to require heavy hoppers.
This gives good chance to
chicken & ~~to~~ or get hand
hoppers remove roll plates
& on when blocked -

Think the driven Roll -
✓ Could have a close grain
Cast instead chilled and
traction than chilled rolls
New danger of flat spot,

✓ The Chilled wheels are
on too light shore edge
on easy but not light
so easy removed if
soft spot develops

~~propentum wrong bet~~
~~little & big roll~~ ✓

S. delivery at Blower
discs horrible mess
10" opening to carry
several hundred tons
angles all wrong ✓

Coal plant elevation
amplified



Short chain motor
on account Oil film slip
Make Knife Edges clean ✓

~~Don't use warm on Giant~~
~~Roller feed - open -~~

~~Cause of shakes top floor~~
~~grants, to roller belt pulley~~
~~11th Street Cross & beam -~~
~~bleky not braided to stone -~~

Walking bet Roller canvas
planned bet top waygo floor

~~Leaking of Coast - 100 ft~~
~~Sheet and double floor~~

~~Cutting down in steel~~
~~front 1st 30 ft -~~

~~Our Camp has been~~
~~Reversed~~

Letter No 8
Was only in regard to
3 High Hauls for 5 ft
Rolls -

on gun - our reg bearing head with
oil jet left off - grease cup
put on - pin holes in all heads to
oil -

Suggested if possible under
acorns + spread chrome
Top Drive -

Provision on roll for 3 High
if gate come on me on standing
up -

Caro changed links
to 1000 point rollers

Hester make sketch of
Hopper + roll now over
3. High -

Dont narrow spouts + chutes
where there is no necessity

24 14 60

Dryer furnace larger more
even way -
Links in shading -

Last 36 Rolls coming in not so
large & cast on ground flat -

Post him about Carburized
Chute & strike plate &
How we fixed chute under
Chalk 3 High fixed 6 then
Hester ~~and~~ ^{at first} sketch of work

Say that we did what he
stated in his letter of Sept 2
Regarding Giant bearings -
We also ~~rehabilitated~~ ^{rehabilitated} with our
Reg. Ball & Roller runs
Cold now -

Tell him ~~regarding~~ ^{regarding} him
Others -

Tell him abt open chutes
& sports,

See letter Sept 1
Spring ~~down~~ and all right
but fix one of the bearings
+ make housing many times
stronger than I high check.

Tell S about calling
up my sketches though
I'll send originals -

Heavy Motor shafts,

them on 6th gear

long beam 5 ft. roll



How about overhanging pinions and
Wintors, chatter & kees spark vs
agriton & expens. pinion & ferris
or Compled motor -

Shot chain - try with ice around
oil film on shaft & say no lodge
no sitting pocket.

Doubt if we get 60% efficiency w 3 H.
Roth without making a lot of fine
think we should go above 40 percent.
hence the return will be very heavy
& think 36 belt will be overloaded.
these would be about 930 tons
of course we ~~can~~ ~~can~~ get 60%
but it will have the objectionable
fines - say that 8 to 10 tons on each
belt was a mistake as we assumed
ships hold 6 tons when on weighing
then only weighed 5 tons so a correction
should be made in addition with the
amount we had the belt was very

Wavy between the idlers -
Lahoud say that with idlers
present distance apart 400 line
of Brunswick would be as
much as a 24 belt shined do
+ on inches - the stretch on belt
will cause it to be taken up
very often, altogether Lahoud
put in the 4 1/2 inch belt, 8 ply
instead of 6 ply -

Its the length of the chains + weight
that counts, rather the depth of
immersion in the chain, the
trouble is film of oil on shaft
would not enough to cut thro it
maybe, sharpen the edges then it
cut through or did work but if
surface the shaft there is film
on thick oil + chains stand still.

Call attention to bottom of
convey belt dropping stuff
below & see how put this floor -
Elo why not raise ceiling as this is
space but it floor
Say quarry channels should be
on ~~the~~ ^{the} ~~land~~ outside as
dust is a nuisance. Good outside

Of course its good idea to
have great extra capacity in CP
but there is floor by west side,
so we should have to work more on
10 hours or have a very expensive
Coar storage. Our mine must
work 20 hours.

Say that need not go good Corrugation
3 High - Cost them so there is
cleaning $\frac{1}{2}$ inch - show new
plate Corrugation - also new
Roller feed ~~stands~~ 3 High with
grooves - ~~told him~~ ^{told him} ~~trucks~~
Check our sports check &
next every 10 month sports

Hester sketch!

How I ~~think~~ over our
screen and ~~all~~ clay -
also about ~~the~~ C. S. layers
amount ~~are~~ at 11'5 + 2'5 1/2'

Scraped ~~just~~ perhaps under
than 5' ~~not~~ to
Cost now ~~and~~ cost much higher
to get ~~the~~ clay

All above in letter
No 9 -

9 feet ~~1 1/2~~ bottom to bottom 10
1st 5' 6' "
2nd 3' "
3rd 1 1/2' "
4th just as close as you can get
how ~~ever~~ that plates sticking -

Not in letter 10

~~You can feed your blowers 20 ton~~
~~of Durostone~~ it will be different
to say how much you can feed
your blowers ~~with~~ per hour.
The stuff is ~~just~~ unlike our
I think ~~the~~ ~~But~~ ~~the~~ ~~fed~~ ~~deton~~
blast at Orange or Reg blowers.

Speak about Kutter fed weigh
house.

Corn -

Letter 10

Speak about the pinion
bearings on the 5 ft rolls -
has to check a tendency is
to give pinion a thrust on bearings
making bearing too small dia
& bearing out bearings - that the
shaft should be collared as
Carr makes it a bearing ample &
will secured - also

Letter 10
about prelatibility of having
grains fastened by sheer
pins & brags / brags for
future Cattle / grain balls
used at 1st test sheer holes
until receipt of using
them is known

5 dump spools &
blowers / insert work
must have roller
feeds at top, Letter 10

Say that I am in doubt & think
it very dangerous to use holes
to feed ore to blowers - but after
shown it will be ok - could even
be sure that the ore would always
be dry where was no blowers
Caldate horses in ore it
might answer but with any

high efficiency in 3' High it
is doubtful if holes will
work.

~~But~~ I have been sweating blood
over sports delivering to rotten heads
at Chalk Blower. We have been
working at it 2 weeks several times
we thought it was ok but when
the roll got proper pressure & rock
segregated in places & we got
broken fins etc the sports plugged
notwithstanding we have put separate
sports & raised the angle.

~~At present~~ ~~we~~ We are now making
a radical change to do away
with solid filled pipe where the
pressure is greatest. We are using a
solid insurable column.

This is the device.

Sketch

all in Letter 10

Let 10
Spoke about 4 way spout
in Rock stock

Say that 24 return belt
from Dwyer to rally well be
ample but distribute it
fairly well - ~~the 1/4 inch~~
~~thick - the 1/4 inch~~
~~thick pieces also & these~~
~~are easy seen & picked -~~

Letter 11

Say that the distribution top
of Dwyer is very important &
should be evenly distributed over
whole well - if not had by
clayey -

Good Rock plates chilled
full inch

I want data as to power in
all kinds conveyors, light &
load - ~~Motor~~

Spoke about Chert Rock Stk
too low down had cut them
all off 100 tons max
Takes several hours get
Motor out tunnel

Brick doors no iron in
Dryer ~~purifier~~ ^{also two of doors} -
doors set on iron stands
not supposed to rotate -
No water now around heat

Wheat bent Motors, better
redesign bramps also wider
base - also arms of all brams
Can be fixed while running
Dust chamber has extra
hand fans - without dust
trouble crossing fields & lands

Revised plan. Carbon header
spank if made too loose and
not 6 inch, if loose Carbon must
be ground to contour -

Regulator tilt under stock
hopper by Sep Dynamometer,

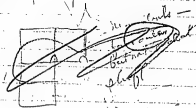
Give him details Roller for
cross check 3 High if goes
ok -

~~Butt~~ Better design the baffle
plate for 64 in. and 5 to 6 in.
to 2 in. use of 1/2 in. can
make one of 1/2 in. 3 in. by it
actually -

Clinton under 3
H still 64 in. up stream
2 ft. 1/2 in. and

Delivery points 20 ft high elevations

plates are ~~glued~~ glued so ~~glued~~ glued so equal
so exchanged to get even -



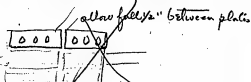
21" end no odd section



Holes in mandrel must be laid out
quite accurate so plates can be exchanged
Use washers under bolts $\frac{1}{4}$ thick
No fins due to punching on washers

Run facing strip down to shaft
+ only face the outside

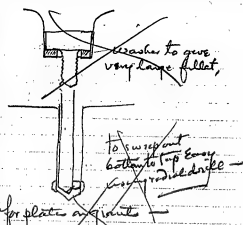
big fillet on bolts for plates
otherwise ~~break~~




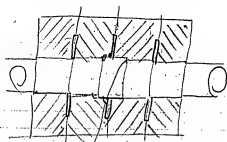
8 bolts to each plate
These give sufficient grip teeth &
thick cylindrical - ~~good~~ good
with lat tool - ~~also~~ carry the
outer inner edges clean across
plate so with strength it will
be good when plates changed

Don't have the core holes in
mandrel. There is only $\frac{1}{2}$ inch
across the key to core - something
might happen - it only gives 5 ton
of metal ~~area~~ area - this is not a saving as
it reduces ~~area~~ area of considerable
Kinetic Value -
in key when plates are made a
very good fillet at bottom

Make



The lock sheet of bolts
 should be $1/16$ lower
 with top -  that come flush



best way - think $1/6$
 Varying in sizes of shaft
 plenty & will be cheaper -

Case press, who
 hand it goes with jump sometimes
 & goes beyond -

Don't use. Mutual calls on
 both ends - only on opposite end
 from Engine -

Motor & hand pulley bringing stuff
 from Rolls to Blower shakes horribly
 Look out for your hand pulleys & Drive
 on the conveyor through crossbar
 I want stuff for bearing that pulley hand to line -

1001: OOG-bearing how about chain
bearing & wiping oil where
it goes this hole -

1002: Are you going to bore out head pull
bearing rabbit & then subover to
make shaft fit bearing without
scrapping

HEAVY CHAIN CANVAS

This one is - 1003



Tell him about ~~chaper~~ ~~Edwards~~
dolls S =

Also about the coupling of 3H
to be secured to shaft same shaft
as he at College

Number all things here after,

All back of this crossed off
in letter 11 - sent Giant
details & drawings by Hank
in letter 11 -

301: Speak about each guide rope
above 3 High subject -
at proper angle - say the
angle of rope made bearing

Pressing force of shake

302: Bottom bearing

if only need you in quantity
to all pbl. no -

done in letter 12

Speak about light chain on machine
fitting (lost in box don't know)
Hvis - find out if bearing penstock
chain chain twisted

Speak about stored paper at
plant (spend grant not enough)
How often size box - what was
chain. have paper under paper
to grant it is no longer
170 Rev at least

Speak about today on
shuffling box. break
Cutter & shaft of motor
Screwing it up by wood
until it pulls shaft
& blow glass

Letter No 13 sent
in Re 5 ft + shaker
drawings Oct 29 to

Letter 14 mailed Nov 8
about chutes & S coming
over also about no iron
in fine doors. Dryer

Letter 15 about
photo of chute export

2-17-1965

(1) Bkt for Controller - ✓
as at Stevenson

(2) Bkt for automatic
coupler - ✓

(3) 20" Pulley for John-
chiller fan

(4) Frame cap - with new
base - Bkt - ✓

(5) Large drum cap - Bkt

(6) Screen over Dye - New

(7) Sliding Windows - New

(8) New Lumar for Redym -

(9) Dust catcher and Pipe -

(10) Changes in Rock Creek
floor

(11) Bkt for General Drive
for conveyors - ✓

(12) From Dye & Stock House
Frame

(13) Fine Grinding Rolls -

(14) Blue Print for Governor -

(15) New Shear divider

(16) Base for Motor

1 over

(Lamp Glass)

Spit for Snake Shells
and connections &

EDISON PHONOGRAPH WORKS RECORDS

The Edison Phonograph Works was incorporated on May 3, 1888, and held the manufacturing rights to Edison's phonograph. Edison was the founding president and majority stockholder. The company operated a factory in West Orange for the manufacture of phonographs and phonograph records, as well as Bates numbering machines and other Edison products. Its products were distributed through sales companies, including the North American Phonograph Co. during the 1890s, the National Phonograph Co. during the 1900s, and Thomas A. Edison, Inc., after 1910. Its factory was destroyed by fire in December 1914 and subsequently rebuilt. In 1924 the company became part of Thomas A. Edison, Inc. The records cover the years 1888-1916. Related material can be found in the Document File Series. The minute book, along with financial documents and other items for the period 1888-1898, can be found in *Thomas A. Edison Papers: A Selective Microfilm Edition, Part III*. A finding aid for the archival record group is available at the Edison National Historic Site.

The selected records are arranged in the following order: (1) Ledger (1907-1916); Journals (1901-1917); and (3) Profit and Loss Statements (1899-1911). Among the records not selected is a binder of shop notices indicating changes in part numbers for phonographs, motion picture apparatus, Bates numbering machines, and other products manufactured at the Works. Also not selected are two investment ledgers listing real estate and machinery accounts (1894-1913); five cash books (1898-1911); and a small folder of stock transfer receipts and routine memoranda.

General Ledger #4 (1907-1916)

This ledger covers the period March 1907-March 1916. As the account book of final entry, it summarizes transactions relating to the manufacture of phonographs and Bates machines. Included are capital, sales, insurance, and reserve accounts, as well as accounts in the name of other Edison companies.

Journal #4 (1901-1908)

This journal covers the period February 1901-February 1908. Chronological entries provide information about transactions posted to various accounts and recorded in the general ledgers.

Journal #5 (1908-1917)

This journal covers the period March 1908-February 1917. Chronological entries provide information about transactions posted to various accounts and recorded in the general ledgers.

Profit and Loss Statements (1899-1911)

These unbound statements consist of annual profit and loss reports that cover the period March 1899-February 1911. Each statement provides summaries of costs, sales revenues, and inventories at the end of accounting periods. The products covered include phonographs, projecting kinetoscopes, numbering machines, wax, and motors.

Binder of Part Number Changes (1909-1910) [not selected]

This binder covers the period April 1909-June 1910 and consists of shop notices by H. Thomas Oliver, George B. Redfearn, and other employees of the Edison Phonograph Works. Each notice indicates a new number or numbers for components being manufactured by the Works. The components are named as well as numbered, and the models and products for which they were intended are also specified. The products include musical and business phonographs, shaving machines, Bates numbering machines, and projecting kinetoscopes.

**Edison Phonograph Works Records
General Ledger #4 (1907-1916)**

This ledger covers the period March 1907-March 1916. As the account book of final entry, it summarizes transactions relating to the manufacture of phonographs and Bates machines. Included are capital, sales, insurance, and reserve accounts, as well as accounts in the name of other Edison companies. The flyleaf is inscribed "Works Gen'l Ledger #4." The book contains 473 numbered pages and an index; many pages are blank.

525

Works Gen'l Ledger

4.

Automobile Account	9
Accounts Receivable	39.8
Accounts Payable	69.7
Adjustment Account	351
Accrued Interest on Bonds	201
Accrued Pay Roll	203

Bond Interest	199.1
Unpaid	209
Bonus of J. M. D. Bureau	309
Inter. Mfg. Co.	309
Inter. Mfg. Co.	256

Capital
Cash
Cotton.

3
189
362

Dividend Account
Refused Charges

29
15

Edison Phon. Mch. of Bell Bonds 279.1

Edison Mfg. Co. Interest 279.1

Edison Storage Battery Co. 311.1

Edison Mfg. Co. 321.1

Edison Building Phon. Co. 331.1

Edison Inc. Thomas A. 373.1

Edison Inc. Interest 60.1

Edison Storage Battery Co. Interest 760.1

Eastern Coal & Coke Co. Stock 27.1

Edison Phon. Mch. Co. 25.1

Edison Phon. Mch. Co. 25.1

Edison Phon. Mch. Co. 25.1

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Edison Phon. Mch. Co. 25.1

Fidelity Trust Co. 7.1

Fidelity Trust Co. 239.1

Fidelity Trust Co. 239.1

Fidelity Trust Co. 239.1

Fidelity Trust Co. 239.1

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Fidelity Trust Co. 239.1

Fidelity Trust Co. 239.1

Fidelity Trust Co. 239.1

General Expense
Goodwin Mfg Co, Settlement

99'
50d

Insurance Bureau Fund 305,353 /
Bond. 347

Liability Insurance Reserve Fund 295

Miscellaneous Assets
Manufacturing
Machinery & Tools

5	4
129	218
249	218

National Phon Co Interest after

Nation Receivables

National Phon Co

Notes Capital

Newark Second Hand Machinery (partial)

249.

285.1.

341.

80,000.1.

38.

Profile & Loos

279/

Real Estate & Building
Returns for Water
Power & Hydropower
Returns for Bad Debt.

269
296
358
359

Sales
Official Account A
Salvage
Sup. for

119
289
363

Proportion Insurance Reserve Fund
Sales Received

501

337 1/2

Unpaid Bond Interest 309
Unpaid Insurance Premium 342
Unclaimed Wages 65
United States Government Bonds Pay 260

Nov

Capital

1867
Nov 1 Balance forward 500 00
Dec 1 Balance forward 500 00
Jan 1 Balance forward 500 00
Feb 1 Balance forward 500 00
Mar 1 Balance forward 500 00
Apr 1 Balance forward 500 00
May 1 Balance forward 500 00
Jun 1 Balance forward 500 00
Jul 1 Balance forward 500 00
Aug 1 Balance forward 500 00
Sep 1 Balance forward 500 00
Oct 1 Balance forward 500 00
Nov 1 Balance forward 500 00
Dec 1 Balance forward 500 00

Miscellaneous Assets

1915	1	Embarked Ledger	5	100	Ret 78 Balance	500
Mar	31	Ret Receipt	78	100		
				500		500
1916						
Mar	2	Balance		500	Ret 78 Balance	100
					Ret 78 Balance	500
				500		500

Fidelity Trust Co

March 1 From General Ledger #3

[illegible]

Automobile Account

1907	March 1	From General Ledger	* 3	10,750.00	1907	Oct 29	Profit & Loss	371	115,000
	April 30	Account Payable	31	300.00			Balance		9000.00
	May 31	"	337	68,000.00					
				176,600.00					176,600.00
1908	March 1	Balance		9000.00	1908	Feb 28	Profit & Loss	308	27,500.00
				9000.00			Balance		4750.00
				9000.00					9000.00
1909	March 1	Balance		6750.00	1909	Dec 31	Profit & Loss	45	2153.16
	April 30	Account Payable	225	106,266		Dec 20	"	24	1,874
	May 31	"	227	3500			Balance		1,615.75
				8047.66					8047.66
1910	March 1	Balance		6485.75	1910	Dec 31	Profit & Loss	73	1671.44
				6485.75		Dec 25	Balance		4842.21
				6485.75					6485.75
1911	March 1	Balance		4862.21	1911	Dec 30	Profit & Loss	124	1013.20
				4862.21		Feb 29	"	1205	2007.89
				4862.21			Balance		3608.25
				4862.21					4862.21
1912	March 1	Balance		5649.25	1912	Dec 31	Profit & Loss	155	1723.00
	April 30	Acct Payable	61	11437.84		Feb 28	Acct Payable	101	3344.89
	May 31	"	75	1800.00			"	171	11303
	June 30	"	89	1955.00			Balance		3602.06
				8627.09					8627.09
1913	March 1	Balance		3602.06	1913	Dec 31	Profit & Loss	208	1036.68
	June 30	Acct Payable	162	190.22		Feb 28	"	223	2073.4
				3732.06			Balance		2468.02
				3732.06					3732.06
1914	March 1	Balance		2468.02	1914	Feb 28	Profit & Loss	279	807.35
				2468.02		May 25	Balance		1668.9
				2468.02					2468.02
1915	March 1	Balance		1668.9	1915	Dec 31	General	325	1144.9
	April 30	Reg. of Disb.	107	6783.65		Dec 31	Acct Payable	249	5007.25
	May 30	"	152	9302.75		Feb 20	Acct Payable	164	2108
	June 30	"	149	5144.5			Acct Payable		2946.15
	July 31	"	110	11088			Acct Payable		111
	Feb 27	Chas. A. Brown Co.	310	12566.15					

Automobile Account

1916			1916		
Feb	29	Forward	Feb	29	Forward
		1566.60			12574.90
		2555.51			
		15574.90			12574.90

Referred Charges

Dec 31	Acct Payable	76	96.75	Dec 31	Due Received	154	11.00
Jan 31	"	69	110.00	Jan 31	"	158	53.00
Feb 28	"	101	111.97	Feb 28	"	159	54.50
			107.77				281.17
Mar 1	Balance		281.17	Mar 31	Due Rec. Fund	73	12.00
Apr 30	Acct Payable	115	47.12	Apr 30	"	77	97.89
May 31	"	138	88.80	May 31	"	180	11.35
Jun 30	"	184	115.34	Jun 30	"	181	11.50
Jul 31	"	224	128.99	Jul 31	"	186	26.50
Aug 31	"	274	175.84	Aug 31	"	193	21.00
				Sep 30	"	195	8.14
				Oct 31	"	199	16.12
				Nov 30	"	202	43.40
				Dec 31	"	205	57.80
				Jan 31	"	210	50.27
				Feb 28	"	214	70.25
							218.80
							26.00
							214.75
							1746.38

Mar 1	Balance		718.75	Mar 31	Due Rec. Fund	710	7.50
Apr 30	Reg of Dist	2672	716.45	Apr 30	"	720	102.10
May 31	"	2716	59.55	May 31	"	735	119.25
Jun 30	"	2746	144.20	Jun 30	"	736	60.77
Jul 31	"	3112	88.12	Jul 31	"	741	131.12
Aug 31	"	321	152.58	Aug 31	"	741	135.45
Sep 30	"	366	144.45	Sep 30	"	741	108.12
				Oct 31	"	751	105.17
				Nov 30	"	751	110.20
				Dec 31	"	756	127.24
				Jan 30	"	760	127.24
				Feb 28	"	765	127.24
							163
							2146.2
							2301.00

Mar 1	Balance		979.62	Mar 31	Income Rec. Fund	283	150.16
Apr 30	"			Apr 30	"	285	210.72
May 31	"			May 31	"	283	81.72
Jun 30	"			Jun 30	"	287	22.80

Deferred Charges.

1916		1917		1918		1919		1920		1921		1922		1923		1924		1925		1926		1927		1928		1929		1930		1931		1932		1933		1934		1935		1936		1937		1938		1939		1940		1941		1942		1943		1944		1945		1946		1947		1948		1949		1950		1951		1952		1953		1954		1955		1956		1957		1958		1959		1960		1961		1962		1963		1964		1965		1966		1967		1968		1969		1970		1971		1972		1973		1974		1975		1976		1977		1978		1979		1980		1981		1982		1983		1984		1985		1986		1987		1988		1989		1990		1991		1992		1993		1994		1995		1996		1997		1998		1999		2000		2001		2002		2003		2004		2005		2006		2007		2008		2009		2010		2011		2012		2013		2014		2015		2016		2017		2018		2019		2020		2021		2022		2023		2024		2025		2026		2027		2028		2029		2030		2031		2032		2033		2034		2035		2036		2037		2038		2039		2040		2041		2042		2043		2044		2045		2046		2047		2048		2049		2050		2051		2052		2053		2054		2055		2056		2057		2058		2059		2060		2061		2062		2063		2064		2065		2066		2067		2068		2069		2070		2071		2072		2073		2074		2075		2076		2077		2078		2079		2080		2081		2082		2083		2084		2085		2086		2087		2088		2089		2090		2091		2092		2093		2094		2095		2096		2097		2098		2099		2100																																																																																																																																																																																												
Feb 1	Forwarded	1916	Feb 1	Forwarded	1917	Feb 1	Forwarded	1918	Feb 1	Forwarded	1919	Feb 1	Forwarded	1920	Feb 1	Forwarded	1921	Feb 1	Forwarded	1922	Feb 1	Forwarded	1923	Feb 1	Forwarded	1924	Feb 1	Forwarded	1925	Feb 1	Forwarded	1926	Feb 1	Forwarded	1927	Feb 1	Forwarded	1928	Feb 1	Forwarded	1929	Feb 1	Forwarded	1930	Feb 1	Forwarded	1931	Feb 1	Forwarded	1932	Feb 1	Forwarded	1933	Feb 1	Forwarded	1934	Feb 1	Forwarded	1935	Feb 1	Forwarded	1936	Feb 1	Forwarded	1937	Feb 1	Forwarded	1938	Feb 1	Forwarded	1939	Feb 1	Forwarded	1940	Feb 1	Forwarded	1941	Feb 1	Forwarded	1942	Feb 1	Forwarded	1943	Feb 1	Forwarded	1944	Feb 1	Forwarded	1945	Feb 1	Forwarded	1946	Feb 1	Forwarded	1947	Feb 1	Forwarded	1948	Feb 1	Forwarded	1949	Feb 1	Forwarded	1950	Feb 1	Forwarded	1951	Feb 1	Forwarded	1952	Feb 1	Forwarded	1953	Feb 1	Forwarded	1954	Feb 1	Forwarded	1955	Feb 1	Forwarded	1956	Feb 1	Forwarded	1957	Feb 1	Forwarded	1958	Feb 1	Forwarded	1959	Feb 1	Forwarded	1960	Feb 1	Forwarded	1961	Feb 1	Forwarded	1962	Feb 1	Forwarded	1963	Feb 1	Forwarded	1964	Feb 1	Forwarded	1965	Feb 1	Forwarded	1966	Feb 1	Forwarded	1967	Feb 1	Forwarded	1968	Feb 1	Forwarded	1969	Feb 1	Forwarded	1970	Feb 1	Forwarded	1971	Feb 1	Forwarded	1972	Feb 1	Forwarded	1973	Feb 1	Forwarded	1974	Feb 1	Forwarded	1975	Feb 1	Forwarded	1976	Feb 1	Forwarded	1977	Feb 1	Forwarded	1978	Feb 1	Forwarded	1979	Feb 1	Forwarded	1980	Feb 1	Forwarded	1981	Feb 1	Forwarded	1982	Feb 1	Forwarded	1983	Feb 1	Forwarded	1984	Feb 1	Forwarded	1985	Feb 1	Forwarded	1986	Feb 1	Forwarded	1987	Feb 1	Forwarded	1988	Feb 1	Forwarded	1989	Feb 1	Forwarded	1990	Feb 1	Forwarded	1991	Feb 1	Forwarded	1992	Feb 1	Forwarded	1993	Feb 1	Forwarded	1994	Feb 1	Forwarded	1995	Feb 1	Forwarded	1996	Feb 1	Forwarded	1997	Feb 1	Forwarded	1998	Feb 1	Forwarded	1999	Feb 1	Forwarded	2000	Feb 1	Forwarded	2001	Feb 1	Forwarded	2002	Feb 1	Forwarded	2003	Feb 1	Forwarded	2004	Feb 1	Forwarded	2005	Feb 1	Forwarded	2006	Feb 1	Forwarded	2007	Feb 1	Forwarded	2008	Feb 1	Forwarded	2009	Feb 1	Forwarded	2010	Feb 1	Forwarded	2011	Feb 1	Forwarded	2012	Feb 1	Forwarded	2013	Feb 1	Forwarded	2014	Feb 1	Forwarded	2015	Feb 1	Forwarded	2016	Feb 1	Forwarded	2017	Feb 1	Forwarded	2018	Feb 1	Forwarded	2019	Feb 1	Forwarded	2020	Feb 1	Forwarded	2021	Feb 1	Forwarded	2022	Feb 1	Forwarded	2023	Feb 1	Forwarded	2024	Feb 1	Forwarded	2025	Feb 1	Forwarded	2026	Feb 1	Forwarded	2027	Feb 1	Forwarded	2028	Feb 1	Forwarded	2029	Feb 1	Forwarded	2030	Feb 1	Forwarded	2031	Feb 1	Forwarded	2032	Feb 1	Forwarded	2033	Feb 1	Forwarded	2034	Feb 1	Forwarded	2035	Feb 1	Forwarded	2036	Feb 1	Forwarded	2037	Feb 1	Forwarded	2038	Feb 1	Forwarded	2039	Feb 1	Forwarded	2040	Feb 1	Forwarded	2041	Feb 1	Forwarded	2042	Feb 1	Forwarded	2043	Feb 1	Forwarded	2044	Feb 1	Forwarded	2045	Feb 1	Forwarded	2046	Feb 1	Forwarded	2047	Feb 1	Forwarded	2048	Feb 1	Forwarded	2049	Feb 1	Forwarded	2050	Feb 1	Forwarded	2051	Feb 1	Forwarded	2052	Feb 1	Forwarded	2053	Feb 1	Forwarded	2054	Feb 1	Forwarded	2055	Feb 1	Forwarded	2056	Feb 1	Forwarded	2057	Feb 1	Forwarded	2058	Feb 1	Forwarded	2059	Feb 1	Forwarded	2060	Feb 1	Forwarded	2061	Feb 1	Forwarded	2062	Feb 1	Forwarded	2063	Feb 1	Forwarded	2064	Feb 1	Forwarded	2065	Feb 1	Forwarded	2066	Feb 1	Forwarded	2067	Feb 1	Forwarded	2068	Feb 1	Forwarded	2069	Feb 1	Forwarded	2070	Feb 1	Forwarded	2071	Feb 1	Forwarded	2072	Feb 1	Forwarded	2073	Feb 1	Forwarded	2074	Feb 1	Forwarded	2075	Feb 1	Forwarded	2076	Feb 1	Forwarded	2077	Feb 1	Forwarded	2078	Feb 1	Forwarded	2079	Feb 1	Forwarded	2080	Feb 1	Forwarded	2081	Feb 1	Forwarded	2082	Feb 1	Forwarded	2083	Feb 1	Forwarded	2084	Feb 1	Forwarded	2085	Feb 1	Forwarded	2086	Feb 1	Forwarded	2087	Feb 1	Forwarded	2088	Feb 1	Forwarded	2089	Feb 1	Forwarded	2090	Feb 1	Forwarded	2091	Feb 1	Forwarded	2092	Feb 1	Forwarded	2093	Feb 1	Forwarded	2094	Feb 1	Forwarded	2095	Feb 1	Forwarded	2096	Feb 1	Forwarded	2097	Feb 1	Forwarded	2098	Feb 1	Forwarded	2099	Feb 1	Forwarded	2100	Feb 1	Forwarded

Notes Payable

Sept 7	Cash	199	1500000	May	1	Accts Receivable	66	1500000
Oct 16	"	109	512771	June 18		Payable	67	512771
Nov 5	"	112	1142713	July 15		"		1142713
10	"	119	1181191			"		1181191
12	"	"	1131155	21		"		1131155
17	"	"	319579	19		"		319579
19	"	"	69331	13		"		69331
21	"	"	86040	20		"		86040
25	"	170	452801	1		"		452801
26	"	173	418019	15		"		418019
27	"	"	149296	10		"		149296
28	"	"	517505	11		"		517505
29	"	"	740032	21		"		740032
30	"	"	263227	22		"		263227
Dec 15	"	130	85053	21		"		85053
22	"	"	95724			"		95724
27	"	"	195259			"		195259
28	"	133	38950	15		"		38950
29	"	"	57193			"		57193
30	"	134	119410			"		119410
31	"	134	683944	20		"		683944
Jan 2	"	"	102881			"		102881
Jan 7	Accts Payable	206	389242	28		"		389242
Jan 2	Cash	140	588890			"		588890
Jan 2	Forwarded	31	1980326	26		"		1980326
Feb 2	"	78				"		
Feb 22	Accts Payable	70	500000			"		500000
Mar 11	"	71	514271			"		514271
17	"	72	881142			"		881142
18	"	"	803711			"		803711
19	"	"	1245911			"		1245911
20	"	"	129800			"		129800
21	"	"	1149155			"		1149155
22	"	"	500000			"		500000
23	"	71	561808			"		561808
24	"	73	345084			"		345084
25	"	73	135392			"		135392
26	"	73	230384			"		230384
27	"	73	160038			"		160038
28	"	73	319783			"		319783
29	"	73	172847			"		172847
30	"	73	277674			"		277674
31	"	73	161515			"		161515
Forwarded		31	14878577			"		14878577

Notes Payable

Jan 2	Forwarded	30	76445246	Dec 31	Forwarded	30	11910014
23	Cash	145	5000000	21	Accts Payable	73	241940
28	"	5	5000000	16	"	74	150000
29	Accts Payable	24	514271	27	Receivable	74	550000
30	Balance	24	514271				
			17287266				17287266
Mar 11	Cash	12	881142	2	Balance	75	247689
17	"	16	803711	73	Accts Receivable	79	200000
18	"	"	561808	70	Payable	81	397689
19	"	"	124591	70	"	82	331200
20	"	173	129800	8	"	"	209400
21	"	"	1149155	16	"	"	319953
22	"	233	135392	13	"	83	423356
23	"	258	319783	15	"	"	423356
24	"	263	150000	20	"	"	423356
25	"	"	160038	76	"	"	430357
26	"	273	172847	73	Receivable	"	500000
27	"	"	230384	14	Payable	"	350000
28	"	"	241940	16	"	"	342300
29	"	"	277674	73	"	"	500000
30	"	333	500000	13	"	"	300000
31	"	83	209989	21	"	"	244904
				13	"	"	300000
				19	"	"	240903
				10	"	"	402197
				21	"	"	361100
				26	"	"	420000
				25	"	"	332100
				20	"	"	355000
				"	"	"	327421
				"	"	"	300000
				16	"	"	231227
				27	"	"	273042
				16	"	"	830
				14	"	"	830
				23	"	"	400077
				16	"	"	316491
				25	"	"	300000
				17	"	"	240076
				12	"	"	417850
				16	"	"	643197

Notes Payable

Mr	To Forwarded	21	57471.89	Mr	To Forwarded	31	187039.80
Dec 17	Cash	102	7212.27	185	Accts Payable	31	5000.00
19	"	"	2432.44	Jan 18	"	86	7997.55
19	"	"	377.69	13	"	"	71451.64
7	"	110	3375.00	15	"	"	4736.06
11	"	111	2096.00	75	"	"	14087.11
18	"	115	3199.53	17	"	86	7441.94
27	Accts Payable	76	30000.00	70	"	"	50000.00
10	Cash	176	37500.00	11	"	"	4736.06
11	"	"	4021.97	17	"	"	5079.55
"	"	"	3000.00	15	"	"	3816.21
15	"	75	4323.56	10	"	"	1841.56
16	"	"	423.00	"	"	"	2748.74
"	"	100	3500.00	"	"	"	1400.00
"	"	"	3000.00	19	"	"	1263.56
17	"	143	33.56	16	"	"	516.70
19	"	144	3581.35	23	"	"	4736.06
23	"	145	3811.00	26	"	"	4736.05
"	"	"	7149.03	13	"	"	1222.75
"	"	"	4323.56	"	"	"	1267.55
24	"	"	1800.00	20	"	"	523.11
25	"	"	5000.00	14	"	"	1274.07
26	"	"	7149.03	15	"	"	1263.56
27	"	"	3321.00	73	"	"	3000.00
"	"	126	4323.57	16	"	"	7024.66
"	"	"	3774.71	26	"	"	1365.06
"	"	"	7789.90	17	"	"	267.35
"	Balance	"	168066.34	73	Accts Payable	86	1544.41
				14	"	87	18000.00
				70	"	"	3581.00
				18	"	"	1906.42
				11	"	"	6980.52
				15	"	"	7571.93
				19	"	"	3028.75
				75	"	"	3890.61
				11	"	"	4089.64
				73	"	"	1146.84
				17	"	"	1173.45
				74	"	"	1119.93
				76	"	"	1324.75
				71	"	"	5404.50
				75	"	"	7418.18
							1659.59
							826405.19

826405.19

Notes Payable

1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	2925	2926	2927	2928	2929	2930	2931	2932	2933	2934	2935	2936	2937	2938	2939	2940	2941	2942	2943	2944	2945	2946	2947	2948	2949	2950	2951	2952	2953	2954	2955	2956	2957	2958	2959	2960	2961	2962	2963	2964	2965	2966	2967	2968	2969</
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Notes Payable

1915		1916		1917		1918		1919	
		Forwarded				Forwarded			
June 15	Cash	15	5061.75	May 15	Accts. Payable	89	5000.00		
17	"	14	111.995	30	"	"	4081.99		
18	"	16	5481.62	31	"	"	4200.00		
21	"	"	5892.61	25	"	"	4200.00		
"	"	"	1900.45	27	"	"	4191.42		
22	"	"	1662.00	34	"	90	4250.00		
23	"	"	1619.64	8	"	"	4250.00		
"	"	"	1123.45	14	"	"	4250.00		
24	"	"	1500.00	21	"	"	4250.00		
25	"	17	1349.75	28	"	"	4127.40		
28	"	17	1659.58	15	"	"	2816.13		
"	"	"	5494.50	"	"	"	1494.96		
"	"	"	2418.74	17	"	"	1674.26		
July 9	"	"	"	"	"	"	1612.57		
12	"	23	2436.53	18	"	"	3924.07		
14	"	"	1670.24	"	"	"	5522.53		
15	"	"	4548.00	15	"	"	5245.63		
16	"	"	2216.94	25	"	"	4836.31		
"	"	"	2847.9	29	"	"	2500.00		
19	"	"	15132.3	21	"	"	3633.24		
20	"	24	1924.54	3	"	91	1244.09		
"	"	"	5500.00	"	"	"	5500.00		
23	"	"	1456.60	June 1	Accts. Payable	90	71.656		
26	"	"	1489.93	16	"	"	3444.00		
"	"	27	6215.97	28	"	"	3113.94		
27	"	"	2565.62	12	"	91	1571.04		
"	"	"	1912.78	15	"	"	1237.50		
"	"	28	3648.31	16	"	"	3771.99		
Aug 2	"	"	"	5	"	"	1230.44		
9	"	29	2742.75	11	"	"	5000.00		
11	"	"	1690.00	16	"	"	5000.00		
"	"	30	5000.00	23	"	"	5000.00		
"	"	"	2500.00	28	"	"	5000.00		
13	"	"	1089.29	12	"	"	5000.00		
"	"	"	2369.43	3	"	"	4102.47		
16	"	"	4040.00	"	"	"	2435.91		
7	"	"	1200.00	14	"	"	1400.00		
"	"	"	2297.20	25	"	"	1403.91		
18	"	"	1324.56	10	"	"	1617.20		
20	"	"	5000.00	20	"	"	5000.00		
"	"	31	2111.14	14	"	"	2471.07		
"	"	"	"	26	"	"	884.6		
"	"	"	"	20	"	"	250.17		
"	"	"	"	"	"	"	5500.00		

Notes Payable

[illegible]

Newark Second Hand Machinery (Retail)

1914		1915	
Dec 31	Reg. of Sales	385	5000 Feb 27 General Expense 273
Jan 30		349	8000
			16000
1915		1915	
Mar 31	Reg. of Sales	447	5000 Mar 31 General Expense 223
			5000

Accounts Receivable

1915		1915	
Mar 31	Accts Payable	332.1	11486.47
	Landries	203.27	410.03
Apr 30	Accts Receivable	346.1	11.15
	Landries	35.1	27.58
	Accts Payable	326.1	22.82
	Cash	29.1	11.51
May 31	Accts Receivable	231.1	127.1
	Landries	325.1	26.0
	Accts Payable	338.1	16.15
June 27	Cash	47.1	1.00
30	Accts Receivable	341.1	0.6
	"	1.1	14.00
	"	1.1	17.0
30	Accts Payable	345.1	126.89
	Landries	1.1	23.60
	Accts Receivable	1.1	1.3
July 31	"	346.1	25.1
	"	1.1	1.85
	"	1.1	1.0
	Landries	247.1	169.43
Aug 17	Accts Rec	348.1	8.00
	"	1.1	3.00
	"	1.1	31.34
	"	1.1	23.00
	"	1.1	24.1
	"	1.1	6.13
31	Accounts Payable	349.1	17.0
	Accounts Receivable	356.1	17.0
	Landries	45.1	23.1
	Forwarded	1646	79.28
			1170.1
			20.1
			1.85
			1.00
			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
			1.00
			1.19
			57.84
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			1.85
			1.00
			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
			1.00
			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
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			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
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			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
			1.00
			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
			1.00
			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
			1.00
			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
			1.00
			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
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			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
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			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
			1.00
			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
			1.00
			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
			1.00
			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
			1.00
			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
			1.00
			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
			1.00
			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
			1.00
			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
			1.00
			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
			1.00
			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
			1.00
			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
			1.00
			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
			1.00
			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
			1.00
			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
			1.00
			1.19
			57.84
			42.44
			1.0
			1170.1
			20.1
			1.85
			1.00
			1.19
			57.84
			42.44

Accounts Receivable

May 30	Forwarded	10	2,777.41
Aug 30	Boats	10	2,034.63
June 30	Amusement	11	2,211.53
	Adm. Exp.	11	2,211.53
July 31	Accts Payable	15	358
	Receivable	15	360.00
			24
			20.00
			33
			16, 3,444.84
Aug 31	Sales	30	2,777.41
	Accts Receivable	17	18.82
			100
	Sales	31	95,734.19
	Accts Receivable	17	25.00
	Payable	15	20,732.23
			46.1
Sept 17	Receivable	17	1,123
			4.96
			106.7
	Notes	14	78.00
			34.51
30	Accounts	19	27
	Sales	40	2,211.53
	Accounts Payable	19	6,119.27
			60.1
Oct 15	Notes Receivable	10	22.00
			11
			20.00
31	Accts Receivable	20	45
	Amusement Expense		6,666
	Sales		420,351,196.90
	Cash		80.1
	Accts Payable		21.1
	Forwarded		43,457.1
			140.92

May 30	Forwarded	10	2,777.41
	Accts Receivable	10	2,034.63
	Gen. Expense	11	2,211.53
			11
	Accts Payable		100.00
	Cash		47.1
	Disc		3.48
	Accts Payable	13	266.00
	Gen. Expense	13	10,000
	Accts Payable	14	22,645.92
			500
			144
			1,177
			36.02
			24
			20.5
			33
July 31	Accts Receivable	15	36.02
			24
			20.5
			33
	Gen. Expense		7,500
	Accounts Payable	16	78.73
	Cash		551,117,19.03
	Discount		24.76
	Accounts Payable	16	63
			69
			1,436,112
			2,443,194
			18.1
Aug 31	Receivable	17	8.00
	Cash		62,141,06,797
	Gen. Expense		37.4
	Accts Receivable	17	25.00
	Payable		30.1
			18.1
	Receivable	19	466
			10.67
			34.41
	Notes	15	78.00
	Accounts	19	27
	Payable		20.00
	Cash		71,167,44,17
	Discount		1,177
	Notes Receivable	15	22.00
			11
			20.00
			45
	Accts Receivable	20	45
	Payable		24
	Forwarded		43,457,1,04,77
			27,903,35,69

Accounts Receivable

Oct 31	Forwarded	10	2,777.41
	Accts Receivable	10	2,034.63
	Accts Payable		2,700.41
	Sales		46,457,32,24,95.73
Nov 27	Notes Receivable	13	53.11
	Accts Receivable	23	20.57
	Sales		451,244,31,00
	Accts Payable	23	1,989,9.88
	Accts Receivable	24	36
			166.7
	Sales		444,13,83,59.96
	Accts Payable	24	59,50.63
			107.1
	Accts Receivable	27	1,403.4
	Accts Payable	26	6,333.36
	Sales		28,1,1,00,32,32
			45,2,16,62,0.14
			804,12,9,1,09.96
			2,553,19,65
	Balance		2,553,19,65
1909			
Mar 31	Accts Receivable	33	254
	Payable		9,033.77
	Sales		444,12,39,85.53
	Accts Receivable	34	12.19
	Payable		93,77.44
	Notes Receivable	14	25.00
			15
			25.00
			16
			25.00
			17
			71,67
	Sales		504,12,41,12.24
	Forwarded		43,457,39,4.63
			110,306,83.1

Oct 31	Forwarded	10	2,777.41
	Cash		80,249,178.69
	Discount		24.93
	Accts Payable	20	3,500
	Cash		88,102,254.43
	Discount		40.30
	Accts Receivable	22	74
	Accts Payable		49,0,8.57
			98,449
			53.11
	Notes Receivable	13	20.57
	Accts Receivable	23	69.59
	Accts Payable		97,42,90,75.28
	Cash		4,1,4,4.66
	Accts Receivable	24	36
			166.7
	Amusement Expense		100.00
	Accts Payable		55
	Cash		106,228,164.03
	Discount		64.67
	Accts Payable		25,1,55,24.23
	Cash		116,154,244.23
	Discount		68.63
	Amusement Expense		26
	Accts Receivable		140.34
	Profit Loss		31,444
	Accounts Payable		96.05
			2,553,19,65
			2,553,19,65
1909			
Mar 31	Balance		2,553,19,65
	Amusement Expense		100.00
	Accts Receivable		254
	Accts Payable		156
	Cash		120,151,156.81
	Discount		88.58
	Amusement Expense		125.00
	Accts Receivable		12.19
	Payable		24.20
	Notes Receivable		25.00
			15
			25.00
			16
			25.00
			17
			12.67
	Cash		133,13,52,23.77
	Forwarded		43,457,1,04,77
			110,306,83.1

Accounts Receivable

Sept 11	Forwarded	47	87	104	104
	Notes Receivable	50	47		
		53	48		
		56	48		
		59	49		
		103	87		
20	Accts Receivable	99	82	55	57
	Sales	103	67	65	1
	Accts Payable		103	50	
	Thos A Edinboro		103	115	15
	Sales	105	11	70	
		99	19	72	12
Oct 31	Accts Receivable	106	90		
	Accts Payable	107	14	66	65
	Thos A Edinboro	108	76	19	
	Accts Payable	146	33		
	Sales	95	127	50	23
	Accts Receivable	109	19	30	
			17	95	
	Accts Payable	111	10	19	51
	Thos A Edinboro		70	63	75
	Accts Payable	114	10	87	50
	Sales	99	159	37	58
		99	71	17	01
	Accts Payable	146	89		
	Accts Receivable	116	10	69	81
	Thos A Edinboro		116	10	69
	Accts Payable	511	60		
	Cash	78	17		
	Accts Receivable		78		
			79		
			19		
			47		
	Sundries		70		
	Sales	101	19	20	85
	Interest Expense	118	10		
	Accts Payable		58	08	72
		190	3	39	70
	Accts Receivable	171	70		
	Accts Payable		70		
		193	3	47	09

Accounts Receivable

30	Balance	107	107	50	
	Sales	107	11	00	70
	Accts Payable	107	11	00	70
	Thos A Edinboro	127	11	00	70
April 20	Sales	103	10	19	35
	Accts Receivable	108	10	19	35
			10	19	35
	Accts Payable	109	10	19	35
	Sales		21	70	
	Thos A Edinboro		11	58	75
	Notes Receivable	93	11	58	75
		51	11	58	75
	Sales	108	66	78	19
	Accts Payable	544	11		
	Accts Receivable	131	27		
	Accts Payable	137	8	45	19
	Thos A Edinboro		11	51	45
	Manufacturing	136	11	51	45
	Accounts Payable	136	11	51	45
	Thos A Edinboro		11	51	45
	Sales	107	64	29	00
		108	89	33	51
	Accounts Receivable	137	11	51	
			16		
			940		
	Accounts Payable	138	70	70	72
	Thos A Edinboro		11	51	45
	Sales	101	75	97	49
	Accounts Payable	22	43		
	Accounts Receivable	140	10	46	
			56		
	Accounts Payable	141	79	11	91
	Thos A Edinboro	147	44	05	99
	Accounts Receivable	143	11	05	
	Sales	118	89	05	78
	Thos A Edinboro	143	11	05	78
	Accts Receivable	146	11	05	78
			160		
			160		
			27	37	
	Sales	133	94	34	57
	Thos A Edinboro	146	10	11	73
	Accts Payable	50	11	73	99
	Forwarded	50	11	73	99
		141	10	11	73

Edison Mfg Co. Interest ap.

1899	Sept 29	Accts Payable	3714	3502.88	1899	Sept 29	Profit & Loss	3714	4161.72
			972	500.55					4161.72
				4161.72					4161.72
1900	May 30	Accts Payable	12	1020.05	1900	Sept 27	Profit & Loss	29	3579.68
	June 30		29	1204.64					
	July 31		38	1516.41					
	Aug 31		46	1799.82					
	Sept 30		60	2124.65					
	Oct 31		72	2523.12					
	Nov 30		84	2983.66					
	Dec 30		107	3424.77					
	Jan 27			4161.72					
				3579.68					3579.68
1901	Sept 30	Accts Payable	190	1624.05	1901	Sept 28	Profit & Loss	51	2907.79
	Oct 31		202	2045.10					
	Nov 31		225	2294.45					
	Dec 31		227	2578.61					
	Jan 28		249	2860.28					
				2707.79					2707.79
1910	March 31	Accounts Payable	261	3300.00	1911	Sept 26	Profit & Loss	78	3158.61
	April 30		270	3800.00					
	May 31		279	4300.00					
	June 30		298	4800.00					
	July 31		308	5300.00					
	Aug 31		318	5800.00					
	Sept 30		330	6300.00					
	Oct 31		340	6800.00					
	Nov 30		360	7300.00					
	Dec 31		361	7800.00					
	Jan 31		374	8300.00					
	Feb 28			8800.00					
				3158.61					3158.61

Thomas A. Edison, Inc. Interest Account

June 30	Accts Payable	417.00	306.19	Oct 29	Profit Loss	170.00	184.15
July 31	"	430.00	148.95				
Aug 31	"	441.00	167.76				
Sept 30	"	450.00	180.00				
Oct 31	"	461.00	187.04				
Nov 30	"	476.00	211.53				
Dec 30	"	486.00	222.31				
Jan 31	"	498.00	234.15				
Feb 29	"	511.00	247.02				
			1852.50				

184.15

March 30	Accts Payable	530.00	1044.31	Feb 28	Profit Loss	68.71	968.02
April 30	"	541.00	1055.97				
May 31	"	551.00	1067.18				
June 30	"	555.00	1080.78				
July 31	"	570.00	1104.75				
Aug 31	"	580.00	1149.50				
Sept 30	"	590.00	1170.50				
Oct 31	"	600.00	1190.50				
Nov 30	"	610.00	1203.04				
Dec 31	"	76.00	1203.04				
Jan 31	"	89.00	1154.04				
Feb 28	"	101.00	1154.04				
			7119.68.02				

7119.68.02

March 31	Accts Payable	115.00	761.43	Apr 30	Accts Payable	75.00	301.10
April 30	"	138.00	898.77	May 31	"	70.00	471.00
June 30	"	146.00	923.37	June 30	"	70.00	541.00
July 31	"	160.00	844.73	Sept 30	Profit Loss	215.00	555.00
Sept 30	"	174.00	730.45				
Oct 31	"	186.00	670.71				
Nov 30	"	197.00	457.59				
Jan 31	"	201.00	457.59				
			6026.50				

6026.50

March 31	Reg. of Dist.	76.00	1939.83
Apr 30	"	76.00	1677.05
May 30	"	76.00	1480.75
June 30	"	74.00	1388.04
July 31	"	31.00	1315.90
Aug 31	"	37.50	1252.50
Sept 30	"	31.00	1221.50

Thomas A. Edison, Inc. Interest A/c

Oct 27	Profit Loss	124.11	62	Oct 31	Forwarded	60	907.09
					Reg. of Dist.	354	811.81
				Nov 30	"	366	746.51
				Dec 31	"	382	711.91
				Jan 30	"	399	687.86
				Feb 27	"	418	555.7
							12977.62

12977.62

May 31	Reg. of Dist.	400.00	129.38	May 31	Reg. of Dist.	437.00	445.85
June 30	General Expenses	117.00	582.57	June 30	"	458.00	367.96
			144.00				7119.91

Unclaimed Wages

1912

Mch	30	Accts Payable	500	700	Aug 9	Cash	126	8810
May	31	"	544	700	Nov 26	"	9	14435
June	29	"	556	770	Feb 21	"	401	13765
Sept	30	"	36	2035				
Oct	31	"	50	325				
Nov	30	"	51	360				
Dec	31	"	76	436				
Jan	31	"	84	520				
Feb	28	"	101	621				
		Profit Loss	187	21800				
				37110				37910

Mch	31	Accts Payable	151	400	Dec 30	Cash	61	4310
Apr	30	"	754	500	June 20	"	79	8120
May	31	"	138	775	Oct 8	"	100	1010
June	30	"	146	140	Oct 15	"	102	10360
July	31	"	161	155	Jan 15	"	144	10440
Aug	30	"	164	150				
Sept	30	"	74	350				
Oct	8	Cash	108	3155				
		Accts Payable	186	3265				
Nov	29	"	197	3745				
Dec	31	"	271	4330				
Jan	28	"	234	495				
		Profit Loss	216	26767				
				37357				37357

Mch	31	Reg of Wch	249	1630	April 18	Cash	28	12351
Apr	30	"	262	1654	Sept 15	"	77	18831
May	29	"	278	1685	Jan 13	"	110	1926
June	31	"	295	1700	Jan 30	Reg of Wch	399	19466
Sept	30	"	341	1771	Feb 15	Cash	126	19187
Oct	31	"	354	1809				
Nov	30	"	366	1850				
Dec	31	"	382	1906				
Jan	27	"	418	1933				
		Profit Loss	215	35512				
				60446				60446

Mar	31	Reg of Disb	147	1040	May 31	Cash	33	1235
May	31	"	150	1108	June 3	"	3	1244
July	21	"	57	1195	Feb 27	"	9	1255
Aug	31	"	537	1245				
Nov	31	"	627	1394				
		Forwarded						

Accounts Payable

Oct 31	Forwarded	71,118,571,95	Oct 31	Forwarded	71,118,571,95
	Accts Payable	72,112,65		Cash	88,100,51
Nov 30	Cash	88,32,82,36		Accts Payable	22,27,21
	Miscunt	25,45		Accts Receivable	2,278,41
	Accts Payable	22,27,21		Sundries	84,22,50,55,49
	Accts Receivable	44,98,57		Accts Payable	22,27,21
		98,49		Cash	97,50,11
	Accts Payable	84,10,51,35		Accts Receivable	22,10,50,55
	Cash	23,25,00		Accts Payable	96,24,73,126
	Accts Receivable	22,69,59		Cash	106,11,51,64
	Cash	97,39,18,55,22		Accts Receivable	24,69,55,63
	Miscunt	97,12,5		Accts Payable	107,19,64,55,64
	Accts Payable	22,26,78,35		Cash	164,34,14,3
	Accts Receivable	96,11,14,29		Accts Payable	126,12,00,12,3
Jan 30	Accts Receivable	106,24,30,7,59		Cash	26,16,1
	Cash	24,24,30,7,59		Accts Receivable	22,638,36
	Miscunt	112,57,6		Accts Payable	28,11,13,75
	Accts Receivable	25,50,10		Receivable	3,03,21,32
	Accts Payable	117,11,94,42		Insurance Account	4,17,73,14
	Cash	11,15,140,35			
	Miscunt	7,50,71			
	Accts Payable	120,62,66			
		28,13,75			
	Receivable	9,60,5			
	Profit Loss	12,38			
		29,92,15			
	Accts Payable	120,45,00,73			
	Balance	64,30,44			
		242,36,64,04			

Mar 31	Accts Payable	124,150,12	Mar 31	Accts Payable	124,150,12
	Manufacturing	12,68		Cash	12,68
	Accts Payable	33,20,79,0		Accts Payable	33,20,79,0
	Receivable	1,56		Cash	12,68
	Cash	12,68		Accts Payable	12,68
	Miscunt	12,68		Accts Payable	12,68
	Accts Payable	12,68		Accts Payable	12,68
	Receivable	12,68		Accts Payable	12,68
	Cash	12,68		Accts Payable	12,68
	Miscunt	12,68		Accts Payable	12,68
	Accts Payable	12,68		Accts Payable	12,68
	Forwarded	12,68		Accts Payable	12,68

Accounts Payable

Oct 30	Forwarded	72,300,103,50	Oct 30	Forwarded	72,300,103,50
	Accts Payable	140,50,05		Cash	140,50,05
May 31	Cash	141,117,18,197		Sundries	150,125,67,39
	Miscunt	6,18,83		Accts Receivable	35,13,23,14
	Accts Receivable	35,13,23,14		Sundries	160,13,20,5,20
	Accts Payable	150,54,40		Cash	142,16,4,28
June 30	Accts Receivable	36,20,5,30		Accts Receivable	157,16,39,2,37
	Accts Payable	160,20,7,18,3		Accts Receivable	157,16,39,2,37
	Manufacturing	11,17,27		Accts Payable	157,16,39,2,37
	Cash	149,139,28,7,81		Sundries	172,145,3,3,80
	Miscunt	6,50,78		Cash	166,30,89,04
	Accts Receivable	36,20,5,30		Accts Payable	38,25,04,92
		399		Sundries	181,9,2,5,88
July 31	Cash	157,146,58,5,2		Accts Receivable	38,13,16,1,34
	Miscunt	67,0,50		Cash	39,174,60
	Insurance Account	37,10,99,55		Accts Payable	900
	Accts Payable	12,50			20,1,66
		172,29,5,1,4		Cash	175,198,10
	Manufacturing	149,7		Sundries	194,14,10,8,46
	Accts Receivable	37,11,3,4,36		Accts Payable	140,16,6,58
Aug 31	Cash	166,124,97,1,7		Accts Receivable	41,12,5,0,90
	Miscunt	63,7,08		Sundries	35,13,52
	Accts Payable	38,25,04,92		Cash	202,15,1,4,40
		181,16,92,32		Accts Payable	184,23,5,5,99
	Accts Receivable	38,23,7,49		Cash	193,12,47,48
Sept 30	Accts Payable	39,56,89		Accts Payable	42,147,93
		900		Accts Receivable	1,51,23,35
	Cash	20,1,86		Sundries	213,14,4,7,55,28
	Miscunt	175,12,6,0,90,18		Forwarded	74,18,67,8,4,82
		472,78			
	Accts Payable	140,36,02,89			
Oct 30	Accts Payable	140,106,58			
	Accts Receivable	12,68			
		97,16,6			
	Accts Payable	141,12,50,0,90			
	Cash	164,14,49,29			
	Miscunt	175,12,6,0,90,18			
	Cash	193,15,1,2,83			
Nov 30	Miscunt	4,68,37			
	Accts Payable	12,197,93			
		1,35,0			
	Forwarded	74,18,67,8,4,82			
		265,18,1,50			

Accounts Payable

Nov 30	Forwarded	73126	780002	Nov 30	Forwarded	73136	780748
	Amount Balance	422	3011		Cash	73	98502
	Accts Receivable		934		Accts Receivable	44	299175
			6320		Accts Payable	44	385
	Accts Payable	213	229962		Surpluses	44	291971
Dec 31	Cash	9	2167945		Accts Payable	275	83389102
	Discount		7677		Surpluses	46	1016050
	Accts Receivable	44	100000		Edison Storage Bldg.		91111
			54715		Accts Payable	47	250002
	Accts Payable		385				72155
		225	868493				17210
Jan 3	Amount Balance	46	10000		Surpluses		280483
31	Accts Payable	47	25000		Accts Receivable	48	1039577
			2155		Cash	18	456326
			17210		Surpluses	237	1689226
	Accts Receivable		21496	Feb 28		27	152455
	Cash	18	2056925		Accts Payable	49	11519
	Discount		121724		Accts Receivable		2075510
	Accts Payable	237	25583		Surpluses	239	15000194
Feb 28	Cash	27	18273584		Edison Storage Bldg.	57	1204558
	Discount		77587				
	Accts Payable	49	15819				
		249	245602				
	Accts Receivable	50	53388				
	Profit Loss	51	1489				
			132616				
			200625636				200625636
140				140			
Mar 31	Cash	37	12946933	Mar 31	Amount Balance	37	9373516
	Discount		536197		Cash	37	50966
	Accts Receivable	55	758		Surpluses	261307	91921
			2366		Accts Receivable	55	440776
	Accts Payable	261	527333		Edison Storage Bldg.		3700094
April 30	Cash	37002	215135	April 30	Accts Receivable	57	1161156
	Discount		1669746		Surpluses	2700	5096658
			175		Cash	46	7651
	Accts Payable	57	1669736		Edison Storage Bldg.	57	907008
May 31	Cash		1058		Accts Payable	57	346161
	Discount		70394		Accts Receivable	58	218368
	Accts Payable	58	70394		Edison Storage Bldg.		346161
		279	655716		Surpluses	279	1169051
June 30	Cash	61	1750		Cash	63	1169051
	Accts Payable		65811		Discount		1655
	Accts Receivable		1750		Forwarded	75	16277165
	Forwarded		1750				17005801

Accounts Payable

June 30	Forwarded	74	6197765	June 30	Forwarded	74	60492432	
30	Accts Payable	288	8100131	30	Accts Payable	61	1250	
July 30	Cash	71	1291476	30	Surpluses	288	8100131	
	Discount		2176		Accts Receivable	61	1200094	
	Accts Receivable	65	45817	30	Edison Storage Bldg.		351792	
	Accts Payable	298	1022293	30	Cash	71	25302	
Aug 31	Cash	79	10971456	30	Accts Receivable	62	175568	
	Discount		2688		Edison Storage Bldg.		190086	
	Accts Receivable	66	854307	30	Surpluses	298	12371987	
	Accts Payable		11148	31	Cash	79	125725	
	Surpluses		435677		Accts Payable	66	1148	
			9601		Surpluses	208	15829619	
	Accts Receivable	65	1811346	30	Cash	87	10933	
Sept 30	Cash	308	1811346	30	Surpluses	318	11000162	
	Discount		1		Accts Receivable	67	516210	
	Accts Receivable	67	1130				188	
	Accts Payable	218	734151		Edison Storage Bldg.		273845	
	Accts Receivable	68	98098		Edison Storage Bldg.	35	214374	
	Surpluses	239	15000194	31	Cash	95	20395	
Oct 31	Cash	95	11575130		Accts Payable	69	875	
	Discount		2858		Accts Receivable		26116	
	Accts Payable	69	875				900	
			26116		Accts Receivable	70	1100020	
	Accts Receivable	70	63615		Edison Storage Bldg.		1409378	
	Accts Payable	308	288598		Surpluses	330	14800430	
Nov 30	Cash	103	11202047	30	Cash	103	739837	
	Discount		2715		Surpluses	340	1161844	
	Accts Payable	340	205541		Accts Receivable	71	850240	
	Accts Receivable	71	45544		Edison Storage Bldg.		957605	
Dec 30	Cash	111	1666575	30	Cash	111	12688	
	Discount		4341				80	
	Accts Receivable	72	29745		Accts Payable	72	846151	
	Accts Payable		80		Accts Receivable		6329471	
		353	571158		Edison Storage Bldg.		6329471	
Jan 31	Cash	119	15097585		Surpluses	353	17734235	
	Discount		2569		Cash	119	550145	
	Accts Receivable	72	109186		Accts Receivable	72	846151	
	Accts Payable		70000		Accts Payable		70000	
		361	214062		Edison Storage Bldg.		557805	
	Manufacturing		171	1759631		Surpluses	361	12313181
Feb 28	Cash		26708	28	Cash	121	4031	
	Discount		333338		Accts Receivable	73	213845	
	Accts Payable		169		Surpluses	372	148267	
	Manufacturing		169		Accts Payable		169	
	Forwarded		169		Forwarded		169	
			32710042				32710042	

Accounts Payable

Jan 31	Forwarded	77,165,010	77,165,010
Feb 29	Accts Receivable	117,453,21	117,453,21
	Accts Payable	514,743,062	514,743,062
	Cash	78,149,674	78,149,674
	Discount	49,336	49,336
	Accts Receivable	117,453,21	117,453,21
	Accts Payable	313,062	313,062
		116	116
		179	179
	Accts Receivable	315	315
	Profit Loss	123,146	123,146
	Cash	19,023,59	19,023,59
Mar 30	Cash	86,124,997	86,124,997
	Discount	57,192	57,192
	Accts Payable	70,709	70,709
	Accts Receivable	74,71,007	74,71,007
	Note Receivable	77,08,05	77,08,05
April 30	Cash	96,163,974	96,163,974
	Discount	84,900	84,900
	Accts Receivable	67,38,07	67,38,07
	Accts Payable	179,185,593	179,185,593
		47,58,93	47,58,93
		533,308,973	533,308,973
May 31	Manufacturing	17,10	17,10
	Cash	105,177,110	105,177,110
	Discount	81,755	81,755
	Accts Payable	68,76,10	68,76,10
	Manufacturing	117	117
	Accts Receivable	3,54,973	3,54,973
	For Account	131,79,197	131,79,197
	Accts Payable	49,76	49,76
		13,64	13,64
	Edison Storage Bldg	8,56,93	8,56,93
	Account Receivable	133,71,76	133,71,76
	Accts Payable	555,73,077	555,73,077
	Cash	114,170,817	114,170,817
	Discount	6,12,94	6,12,94
	Accts Payable	136,76	136,76
		135	135
July 31	Accts Receivable	123,13,60	123,13,60
	Cash	79,13,56	79,13,56
	Forwarded	110,023,124	110,023,124
Jan 31	Forwarded	77,165,010	77,165,010
Feb 29	Sundries	511,79,541	511,79,541
	Cash	78,40,24,01	78,40,24,01
	Account Receivable	118,70,08,32	118,70,08,32
	Accts Payable	119,24,507	119,24,507
		116	116
	Edison Storage Bldg	8,33,28	8,33,28
	Accts Payable	179,500	179,500
	Accts Receivable	31,31,22	31,31,22
	Edison Storage Bldg	173,82,78	173,82,78
	Accts Receivable	49	49
		19,023,59	19,023,59
Mar 30	Balance	4,423,08	4,423,08
	Cash	86,558,75	86,558,75
	Sundries	57,14,931	57,14,931
	Accts Receivable	74,11,057	74,11,057
	Edison Stor. Bldg	19,11,78	19,11,78
	Note Receivable	53,77,010	53,77,010
	Cash	96,19,27	96,19,27
	Accts Payable	179,185,593	179,185,593
		47,58,93	47,58,93
	Accts Receivable	130,19,77	130,19,77
	Edison Storage Bldg	73,27,28	73,27,28
	Sundries	524,3,500	524,3,500
	Cash	105,16,569	105,16,569
May 31	Sundries	541,12,451	541,12,451
	Accts Payable	131,11,76	131,11,76
		135	135
	Accts Receivable	1,8,45,59	1,8,45,59
	Edison Storage Bldg	133,71,76	133,71,76
	Account Receivable	134,78,03	134,78,03
	Sundries	555,73,077	555,73,077
	Cash	114,170,817	114,170,817
	Edison Storage Bldg	134,65,76	134,65,76
	Accts Payable	76,57	76,57
		125	125
	Cash	173,13,74	173,13,74
	Sundries	17,10,803	17,10,803
	Account Receivable	128,70,20	128,70,20
	Accts Payable	8,63	8,63
		173	173
	Forwarded	79,17,00	79,17,00
		160,023,124	160,023,124

Accounts Payable

July 31	Forwarded	78,170,023	78,170,023
	Discount	132	132
	Account Payable	179,879,77	179,879,77
	Account Receivable	137,879,77	137,879,77
		138	138
	Edison Storage Bldg	879,146	879,146
	Account Payable	879,23	879,23
		75,76	75,76
		10,043	10,043
	Discount	10,043	10,043
	Account Payable	70,19,19,66	70,19,19,66
	Account Receivable	141,718,05	141,718,05
	Account Payable	900	900
	Manufacturing	1843,00	1843,00
	Edison Storage Bldg	44,27,02,04	44,27,02,04
	Cash	141,141,69,43	141,141,69,43
	Discount	846,00	846,00
	Account Receivable	43,77,1,61	43,77,1,61
	Account Payable	139,8,52	139,8,52
		1462	1462
		6,18,19	6,18,19
	Cash	151,199,54,73	151,199,54,73
	Discount	1,25,28	1,25,28
	Accts Receivable	147,17,35,03	147,17,35,03
	Accts Payable	50,140,10,07	50,140,10,07
	Accts Receivable	147,1,64	147,1,64
		2,63	2,63
Nov 30	Cash	11,181,424	11,181,424
	Discount	1,103,78	1,103,78
	Accts Receivable	150,37,21,7	150,37,21,7
	Accts Payable	61,35,11,54	61,35,11,54
	Cash	21,149,055	21,149,055
	Discount	1,155,79	1,155,79
	Accts Payable	76,46,73,2	76,46,73,2
	Accts Receivable	153,24,51,49	153,24,51,49
	Accts Payable	104,1,106	104,1,106
	Cash	31,75,586	31,75,586
	Discount	1,102,541	1,102,541
	Accts Payable	89,37,10,67	89,37,10,67
	Accts Receivable	96,18,82,67	96,18,82,67
	Accts Payable	1,1,50	1,1,50
		19,050	19,050
	Forwarded	80,77,77,10	80,77,77,10
		39,17,18,37	39,17,18,37
July 31	Forwarded	78,170,023	78,170,023
Aug 31	Forwarded	78,170,023	78,170,023
	Cash	137,879,77	137,879,77
	Sundries	231,58,65,88	231,58,65,88
	Account Payable	141,700	141,700
	Account Receivable	79,11,19	79,11,19
	Cash	141,718,05	141,718,05
	Sundries	36,144,74,72	36,144,74,72
	Account Payable	1462	1462
		6,18,19	6,18,19
	Edison Storage Bldg	7,55,1,43	7,55,1,43
	Cash	151,7,55,1,43	151,7,55,1,43
	Sundries	501,66,80,77	501,66,80,77
	General Expense	30,60,01	30,60,01
	Sundries	147,27,64,50	147,27,64,50
	Cash	11,27,77,77	11,27,77,77
	Sundries	61,19,67,63	61,19,67,63
		150	150
	Note Receivable	607,13,4,52	607,13,4,52
	Cash	211,602,58	211,602,58
	Sundries	76,20,91,52	76,20,91,52
		154,13,13,52	154,13,13,52
	Accts Payable	317,1,1,100	317,1,1,100
	Cash	317,75,7,28	317,75,7,28
	Sundries	89,18,55,66	89,18,55,66
	Note Receivable	61,27,77,59	61,27,77,59
	Accts Payable	156,71,63	156,71,63
	Sundries	157,55,5,49	157,55,5,49
		157,55,5,49	157,55,5,49
	General Expense	157,55,5,49	157,55,5,49
	Accts Payable	166,150	166,150
	Forwarded	80,77,77,10	80,77,77,10
		39,17,18,37	39,17,18,37

Accounts Payable

Feb		Feb		Feb		Feb	
28	Forwarded	79 197 42 756 7	28	Forwarded	79 197 42 756 7	28	Forwarded
	Accts Payable	201 273 16 78		Sundries	10 170 5 719 10 48		Sundries
	Cash	41 19 35 6 09		Cash	41 130 7 78		Cash
	Discount	91 0 44		Accts Payable	161 300 00		Accts Payable
	Accts Payable	161 300 00		Cash	161 153 60		Cash
		161 153 60		Profit Loss	161 9 16		Profit Loss
		90 16		Accts Payable	161 8 90		Accts Payable
	Accts Receivable	161 11 13		Sundries	161 31 13 17		Sundries
	Accts Payable	161 11 13		Wm. A. Davidson	161 3 28 75 73		Wm. A. Davidson
	Sundries	101 11 13 79					
		72 155 65 91					
Mar	31	Accts Payable	74 17 75	Mar	31	Accts Payable	174 17 75
	Accts Receivable	75 75 74 8		Sundries	174 17 75		Sundries
	Cash	51 19 7 95 70		Cash	51 17 81 01		Cash
	Discount	91 4 91		Sundries	115 19 75 75		Sundries
	Accts Payable	115 3 45 08		Cash	173 18 75 17		Cash
Apr	30	Accts Receivable	177 2 16 94	Apr	30	Accts Payable	177 2 16 94
	Cash	6 12 11 6 21		Cash	61 2 16 94		Cash
	Discount	10 75 31		Sundries	181 10 28 55 40		Sundries
	Accts Payable	181 10 28 55 40		Sundries	181 10 28 55 40		Sundries
		181 10 28 55 40		Cash	11 77 52		Cash
	Accts Receivable	11 77 52		Sundries	138 19 30 79 99		Sundries
	Cash	71 2 19 50 145		Cash	101 10 28 55 40		Cash
	Discount	10 75 31		Accts Payable	181 10 28 55 40		Accts Payable
	Accts Payable	138 19 30 79 99		Cash	80 11 77 52		Cash
June	11	Notes	67 770 000	June	30	Accts Payable	181 10 28 55 40
	Accts	181 10 28 55 40		Accts Payable	181 10 28 55 40		Accts Payable
	Cash	50 157 07 68		Cash	181 10 28 55 40		Cash
	Discount	50 157 07 68		Sundries	181 10 28 55 40		Sundries
	Notes Receivable	181 10 28 55 40		Cash	181 10 28 55 40		Cash
	Accts Payable	181 10 28 55 40		Accts Payable	181 10 28 55 40		Accts Payable
	Wm. A. Davidson	181 10 28 55 40		Cash	181 10 28 55 40		Cash
	Accts Receivable	181 10 28 55 40		Sundries	181 10 28 55 40		Sundries
		181 10 28 55 40					
July	31	Accts Payable	181 10 28 55 40	July	31	Accts Payable	181 10 28 55 40
	Cash	181 10 28 55 40		Cash	181 10 28 55 40		Cash
	Discount	181 10 28 55 40		Sundries	181 10 28 55 40		Sundries
	Notes Payable	181 10 28 55 40		Forwarded	181 10 28 55 40		Forwarded
		181 10 28 55 40					

Accounts Payable

July		July		July		July	
31	Forwarded	80 1050 165 2	31	Forwarded	80 1050 165 2	31	Forwarded
	Accts Payable	198 11 85 5 14		Sundries	198 11 85 5 14		Sundries
	Cash	98 2 16 233		Cash	98 2 16 233		Cash
	Sundries	161 120 06 51		Sundries	161 120 06 51		Sundries
		195 11 85 5 14		Accts Payable	195 11 85 5 14		Accts Payable
	Accts Payable	195 11 85 5 14		Cash	107 6 80 77		Cash
		107 6 80 77		Sundries	176 16 78 2 18		Sundries
	Accts Receivable	198 11 85 5 14		Wm. A. Davidson	198 11 85 5 14		Wm. A. Davidson
	Accts Payable	186 70 57 16 89		Sundries	186 70 57 16 89		Sundries
	Sundries	118 7 77 10		Cash	118 7 77 10		Cash
		700 11 85 5 14		Sundries	700 11 85 5 14		Sundries
	Accts Payable	700 11 85 5 14		Accts Payable	700 11 85 5 14		Accts Payable
	Sundries	700 11 85 5 14		Sundries	700 11 85 5 14		Sundries
	Cash	197 188 4 58		Cash	197 188 4 58		Cash
		72 155 65 91					
Aug	31	Accts Payable	174 17 75	Aug	31	Accts Payable	174 17 75
	Accts Receivable	75 75 74 8		Sundries	174 17 75		Sundries
	Cash	51 19 7 95 70		Cash	51 17 81 01		Cash
	Discount	91 4 91		Sundries	115 19 75 75		Sundries
	Accts Payable	115 3 45 08		Cash	173 18 75 17		Cash
Sept	30	Accts Receivable	177 2 16 94	Sept	30	Accts Payable	177 2 16 94
	Cash	6 12 11 6 21		Cash	61 2 16 94		Cash
	Discount	10 75 31		Sundries	181 10 28 55 40		Sundries
	Accts Payable	181 10 28 55 40		Sundries	181 10 28 55 40		Sundries
		181 10 28 55 40		Cash	11 77 52		Cash
	Accts Receivable	11 77 52		Sundries	138 19 30 79 99		Sundries
	Cash	71 2 19 50 145		Cash	101 10 28 55 40		Cash
	Discount	10 75 31		Accts Payable	181 10 28 55 40		Accts Payable
	Accts Payable	138 19 30 79 99		Cash	80 11 77 52		Cash
Oct	31	Notes	67 770 000	Oct	31	Accts Payable	181 10 28 55 40
	Accts	181 10 28 55 40		Accts Payable	181 10 28 55 40		Accts Payable
	Cash	50 157 07 68		Cash	181 10 28 55 40		Cash
	Discount	50 157 07 68		Sundries	181 10 28 55 40		Sundries
	Notes Receivable	181 10 28 55 40		Cash	181 10 28 55 40		Cash
	Accts Payable	181 10 28 55 40		Accts Payable	181 10 28 55 40		Accts Payable
	Wm. A. Davidson	181 10 28 55 40		Cash	181 10 28 55 40		Cash
	Accts Receivable	181 10 28 55 40		Sundries	181 10 28 55 40		Sundries
		181 10 28 55 40					
Nov	30	Accts Payable	181 10 28 55 40	Nov	30	Accts Payable	181 10 28 55 40
	Cash	181 10 28 55 40		Cash	181 10 28 55 40		Cash
	Discount	181 10 28 55 40		Sundries	181 10 28 55 40		Sundries
	Notes Payable	181 10 28 55 40		Forwarded	181 10 28 55 40		Forwarded
		181 10 28 55 40					

Accounts Payable

Nor		Nor		Nor		Nor	
20	Forwarded	81	166 1/4	20	Forwarded	81	180 7/8
20	Note Payable	71	1144 15	31	Note Payable	206	870 5/8
19	"	"	1278 00	"	Surplus	"	162 3/4
17	"	"	873 71	"	Cash	134	950 21/2
11	"	"	881 1/2	"	Surplus	207	87 1/2
18	"	"	105 7/8	31	Cash	144	340 7/8
4	Acct Receivable	205	1044 7/8	Jan 31	Discount	"	50 00
31	"	205	500	"	Surplus	211	142 1/2
50	"	"	110 7/8	"	Acct Payable	"	101 88
"	Cash	134	608 1/2	"	General Expense	"	300 00
"	Discount	"	20 5/8	"	Surplus	211	273 1/2
"	Acct Payable	207	465 00	Feb 28	Note Payable	214	3 60 1/2
18	Note Payable	71	5000 00	"	General Expense	215	750 00
"	"	"	56 18 08	"	Surplus	214	177 1/2
17	"	73	365 04	"	Cash	10	21 00
13	"	"	1583 92	"	Surplus	216	27 41 50
20	"	"	2303 84	"	Profit Loss	"	88 00
15	"	"	1600 08	"	Acct Payable	216	73 55
20	"	"	319 82	"	"	"	19 00
27	"	"	1728 47	"	"	"	11 1/2
27	"	"	276 79				
31	"	"	2419 40				
31	"	"	1500 00				
Jan 31	Cash	144	2506 1/4				
"	Acct Payable	211	50 188				
"	Acct Receivable	"	688 79				
"	Acct Payable	211	471 97 0				
Feb 28	"	206	239 87				
"	Cash	107	2713 67				
"	Discount	"	22				
"	Acct Receivable	216	894 29				
"	Acct Payable	206	1355				
"	"	"	1900 11 5				
"	Profit & Loss	213	952				
"	Balance	"	114 56 55				
			2472 56 79				
							2472 56 79
Mar 31	Acct Receivable	205	449 96	Mar 31	Balance	211	86 75
"	Cash	21	115 68 52	"	Surplus	211	20 37 50
"	Discount	"	27 4	"	Acct Receivable	"	20 00
"	Reg of Dist.	207	44 69 68	"	Cash	21	58 69
Apr 30	"	207	111 11 1/2	"	Reg of Dist.	214	11 1/2
"	Cash	37	111 60	Apr 30	"	26 23 1/2	11 1/2

Accounts Payable
114[illegible]

Account Payable

Oct	16	Forwarded	83	10	557.153	Oct	16	Forwarded	83	21	1174.06
		Note Payable	83		433.57		31	Cash	89		704.58
	14	"			3500.00			Reg of Dist	254	21.6	88.45
	16	"			473.00			Acct Payable	27	2	89.91
	23	"			5000.00			Summies		4.65	21.37
	13	"			3000.00		30	Reg of Dist	366	21.1	74.75
	21	"			7449.01			Cash	89		448.64
	13	"			3000.00			Acct Payable	750		1154.6
	19	"			2409.03			Summies	751	11	23.145
	10	"			404.97		31	Reg of Dist	352	755	210.93
	21	"			3811.00			Acct Payable	755		177.43
	26	"			4200.00			Summies			359.22
	25	"			3521.00			Sale			57.922
	20	"			3250.00			Cash	109	21	115.60
		"			3271.21			Acct Payable	756		146.01
		"			3000.00			Thos A Robinson			12.57
	16	"	81		2312.27						
	27	"			2930.42						
	16	"	83		3581.35						
	31	Cash	89	21	4849.44						
		Discount			706.52						
		Reg of Dist	254		4828.62						
		Acct Payable	27		2789.91						
		Receivable			335.50						
Nov	30	Reg of Dist	366		2711.61						
		Cash	99	176	6582.8						
		Discount			93.76						
		Acct Payable	750		115.66						
		Receivable	751		717.51						
	14	Note Payable	81		5000.00						
	13	"			4000.77						
	15	"			3165.91						
	25	"			3000.00						
	17	"			2901.78						
	17	"			4196.50						
	16	"			6434.99						
	23	"			5201.03						
Dec	31	Acct Receivable	751		1787.49						
		Thos A Robinson			150.81						
		Reg of Dist	352	89	516.97						
		"			123.10						
		Acct Payable	755		1771.42						
		Receivable			85.57						

Accounts Payable

1892		1893		1894		1895	
Jan 31	Forwarded	84	2340	171	151	Jan 31	Forwarded
"	Cash	109	243	135	99	Jan 30	Cash
"	Discount	"	"	"	"	"	Reg of Dist
"	Accts Payable	296	740	116	91	"	Accts Payable
Jan 30	Cash	118	193	55	02	"	Surplus
"	Discount	"	"	"	"	"	Sales
"	Reg of Dist	249	410	70	28	"	Trunk
"	"	"	"	"	"	Feb 27	State of Ind
"	"	"	"	"	"	"	Accts Receivable
"	Accts Rec	700	"	"	"	"	Surplus
"	Payable	"	"	"	"	"	Reg of Dist
"	Int Rec	761	"	"	"	"	"
"	Int Expense	"	"	"	"	"	Cash
"	Surplus	762	31	89	95	"	Accts Payable
"	Notes Payable	85	"	"	"	"	"
13	"	"	"	"	"	"	"
15	"	"	"	"	"	"	"
18	"	"	"	"	"	"	"
11	"	"	"	"	"	"	"
12	"	"	"	"	"	"	"
20	"	"	"	"	"	"	"
11	"	"	"	"	"	"	"
12	"	"	"	"	"	"	"
15	"	"	"	"	"	"	"
"	"	"	"	"	"	"	"
10	"	"	"	"	"	"	"
"	"	"	"	"	"	"	"
"	"	"	"	"	"	"	"
19	"	"	"	"	"	"	"
14	"	"	"	"	"	"	"
23	"	"	"	"	"	"	"
13	"	"	"	"	"	"	"
"	"	"	"	"	"	"	"
20	"	"	"	"	"	"	"
14	"	"	"	"	"	"	"
30	Surplus	762	31	89	95	"	"
"	Manufacturing	762	31	89	95	"	"
Feb 21	Accts Receivable	765	"	"	"	"	"
"	"	"	"	"	"	"	"
"	"	"	"	"	"	"	"
"	Reg of Dist	416	"	"	"	"	"
"	"	"	"	"	"	"	"
"	Cash	27	445	10	39	"	"
"	Discount	"	"	"	"	"	"

Accounts Payable

Forwarded		Forwarded	6/6966
24	100	Forwarded	6/6966
25	100		
26	100		
27	100		
28	100		
29	100		
30	100		
31	100		
32	100		
33	100		
34	100		
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91	100		
92	100		
93	100		
94	100		
95	100		
96	100		
97	100		
98	100		
99	100		
100	100		

Accounts Payable

Forwarded		Forwarded	6/696672
Jan 31	Accts. Payable	358.	189.40
"	"	358.	189.40
"	"	358.	189.40
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General Expense

March 1	From General Ledger	3 1/2	102 27 18	March 30	Cash	15 1/2	18 81
9	Accts Receivable	22 1/2	678	31	Accts Payable	22 1/2	109 588
10	"	"	2 35	April 27	Cash	25 0	8 31 1/2
"	"	"	7 41	30	Accts Payable	22 1/2	61 71 88
19	"	"	9 00	May 31	"	22 1/2	1 1 1/2
30	"	"	5 00	June 30	Cash	22 1/2	1 1 1/2
"	"	22 1/2	92 98	"	Accts Payable	22 1/2	13 11
"	"	"	1 20 00	July 31	"	22 1/2	1 20 00
"	"	22 1/2	1 54 21 1/2	"	Forwarded	22 1/2	1 54 21 1/2
"	Accts Payable	22 1/2	5787 0 37	"	"	22 1/2	5787 0 37
"	Manufacturing	"	1 25 0 669	"	"	"	"
Apr. 30	Accts Receivable	22 1/2	7 08	"	"	"	"
"	"	"	6 1 32 1/2	"	"	"	"
"	"	"	18 08	"	"	"	"
"	"	22 1/2	68 16 1/2	"	"	"	"
"	Accts Payable	"	8 5	"	"	"	"
"	Accts Receivable	"	1 00 00	"	"	"	"
"	Manufacturing	22 1/2	348 89 1	"	"	"	"
"	Accts Payable	22 1/2	44 46 1/2	"	"	"	"
"	Manufacturing	22 1/2	1 25 0 28 1/2	"	"	"	"
May 31	Accts Receivable	22 1/2	1 25 00 1	"	"	"	"
"	"	22 1/2	1 25 71 1	"	"	"	"
"	"	22 1/2	6 988 1	"	"	"	"
"	"	22 1/2	68 68 1/2	"	"	"	"
"	Cash	22 1/2	03 1	"	"	"	"
"	Manufacturing	22 1/2	142 60 06	"	"	"	"
"	Accts Payable	"	1 25 71 1	"	"	"	"
"	"	22 1/2	1 5 53	"	"	"	"
June 30	Manufacturing	22 1/2	1 00 00 1	"	"	"	"
"	Accts Receivable	22 1/2	409 28 1	"	"	"	"
"	"	"	77 00 1	"	"	"	"
"	"	22 1/2	1 00 00 1	"	"	"	"
"	"	"	75 71 1	"	"	"	"
"	Accts Payable	"	26 1	"	"	"	"
"	"	"	45 7 00	"	"	"	"
"	Manufacturing	"	1 25 0 6 1/2	"	"	"	"
July 31	Accts Rec	22 1/2	1 25 00 1	"	"	"	"
"	"	22 1/2	57 86 1	"	"	"	"
"	"	"	48 44 1	"	"	"	"
"	Machinery & Tools	22 1/2	2 47 1	"	"	"	"
"	"	22 1/2	1 01 1 03 1	"	"	"	"
"	Manufacturing	"	8 37 1 20	"	"	"	"
"	Accts Payable	"	1 25 0 28 1/2	"	"	"	"
"	Forwarded	"	6 988 1/2	"	"	"	"
			22 1/2 1 3 88				

General Expense

1899	Nov. 30	Forwarded	101.41	11,105.59	1899	Nov. 30	Forwarded	101.41	11,105.59
		Manufacturing	51.4	14,861.59			Manufacturing	51.4	14,861.59
		Discount	97.4	44.56			Discount	97.4	44.56
		Accts Payable	96.4	5,597.34.55			Accts Payable	96.4	5,597.34.55
		Manufacturing	2.4	11,752.52			Manufacturing	2.4	11,752.52
		Accts Receivable	106.4	100.00			Accts Receivable	106.4	100.00
		Discount	106.4	64.67			Discount	106.4	64.67
		Accts Payable	107.4	4,220.85			Accts Payable	107.4	4,220.85
		Manufacturing	116.4	1,036.53			Manufacturing	116.4	1,036.53
		Discount	116.4	58.61			Discount	116.4	58.61
		Accts Receivable	26.4	100.00			Accts Receivable	26.4	100.00
		Accts Payable	120.4	37,060.01			Accts Payable	120.4	37,060.01
		Manufacturing	27.4	1,057.24			Manufacturing	27.4	1,057.24
			28.4	1,057.24				28.4	1,057.24
			587,336.13					587,336.13	

1899	Mar. 31	Balance	101.41	10,721.24	1899	Mar. 31	Balance	101.41	10,721.24
		Accts Payable	120.4	36,448.75			Accts Payable	120.4	36,448.75
		Manufacturing	31.4	4,212.09			Manufacturing	31.4	4,212.09
		Accts Receivable	125.4	100.00			Accts Receivable	125.4	100.00
		Discount	125.4	184.58			Discount	125.4	184.58
		Accts Receivable	34.4	12,500			Accts Receivable	34.4	12,500
		Discount	133.4	42.61			Discount	133.4	42.61
		Accts Payable	100.4	26,031.35			Accts Payable	100.4	26,031.35
		Manufacturing	35.4	4,852.95			Manufacturing	35.4	4,852.95
		Accts Receivable	100.4	100.00			Accts Receivable	100.4	100.00
		Accts Payable	100.4	25,684.20			Accts Payable	100.4	25,684.20
		Manufacturing	101.4	4,070.40			Manufacturing	101.4	4,070.40
		Discount	101.4	44.47			Discount	101.4	44.47
		Accts Receivable	36.4	100.00			Accts Receivable	36.4	100.00
		Accts Payable	100.4	27,720.73			Accts Payable	100.4	27,720.73
		Manufacturing	101.4	5,999.61			Manufacturing	101.4	5,999.61
		Discount	101.4	64.13			Discount	101.4	64.13
		Accts Payable	101.4	74.17			Accts Payable	101.4	74.17
		Manufacturing	172.4	26,500.50			Manufacturing	172.4	26,500.50
		Discount	172.4	3,859.20			Discount	172.4	3,859.20
		Accts Receivable	37.4	1,250.00			Accts Receivable	37.4	1,250.00
		Accts Payable	38.4	100.00			Accts Payable	38.4	100.00
		Forwarded	103.4	5,010.21			Forwarded	103.4	5,010.21
			21.4	1,211.25				21.4	1,211.25

General Expense

1899	Aug. 31	Forwarded	101.41	11,105.59	1899	Aug. 31	Forwarded	101.41	11,105.59
		Manufacturing	51.4	14,861.59			Manufacturing	51.4	14,861.59
		Discount	97.4	44.56			Discount	97.4	44.56
		Accts Payable	96.4	5,597.34.55			Accts Payable	96.4	5,597.34.55
		Manufacturing	2.4	11,752.52			Manufacturing	2.4	11,752.52
		Accts Receivable	106.4	100.00			Accts Receivable	106.4	100.00
		Discount	106.4	64.67			Discount	106.4	64.67
		Accts Payable	107.4	4,220.85			Accts Payable	107.4	4,220.85
		Manufacturing	116.4	1,036.53			Manufacturing	116.4	1,036.53
		Discount	116.4	58.61			Discount	116.4	58.61
		Accts Receivable	26.4	100.00			Accts Receivable	26.4	100.00
		Accts Payable	120.4	37,060.01			Accts Payable	120.4	37,060.01
		Manufacturing	27.4	1,057.24			Manufacturing	27.4	1,057.24
			28.4	1,057.24				28.4	1,057.24
			587,336.13					587,336.13	

1899	Mar. 31	Balance	101.41	10,721.24	1899	Mar. 31	Balance	101.41	10,721.24
		Accts Payable	120.4	36,448.75			Accts Payable	120.4	36,448.75
		Manufacturing	31.4	4,212.09			Manufacturing	31.4	4,212.09
		Accts Receivable	125.4	100.00			Accts Receivable	125.4	100.00
		Discount	125.4	184.58			Discount	125.4	184.58
		Accts Receivable	34.4	12,500			Accts Receivable	34.4	12,500
		Discount	133.4	42.61			Discount	133.4	42.61
		Accts Payable	100.4	26,031.35			Accts Payable	100.4	26,031.35
		Manufacturing	35.4	4,852.95			Manufacturing	35.4	4,852.95
		Accts Receivable	100.4	100.00			Accts Receivable	100.4	100.00
		Accts Payable	100.4	25,684.20			Accts Payable	100.4	25,684.20
		Manufacturing	101.4	4,070.40			Manufacturing	101.4	4,070.40
		Discount	101.4	44.47			Discount	101.4	44.47
		Accts Receivable	36.4	100.00			Accts Receivable	36.4	100.00
		Accts Payable	100.4	27,720.73			Accts Payable	100.4	27,720.73
		Manufacturing	101.4	5,999.61			Manufacturing	101.4	5,999.61
		Discount	101.4	64.13			Discount	101.4	64.13
		Accts Payable	101.4	74.17			Accts Payable	101.4	74.17
		Manufacturing	172.4	26,500.50			Manufacturing	172.4	26,500.50
		Discount	172.4	3,859.20			Discount	172.4	3,859.20
		Accts Receivable	37.4	1,250.00			Accts Receivable	37.4	1,250.00
		Accts Payable	38.4	100.00			Accts Payable	38.4	100.00
		Forwarded	103.4	5,010.21			Forwarded	103.4	5,010.21
			21.4	1,211.25				21.4	1,211.25

General Expense

May 31	Forwarded	100.31	164.66	May 31	Forwarded	100.31	164.66
	Accounts Payable	279.1	562.02	June 30	Wholesale of Sales	64.1	149.93
	Manufacturing	1.1	109.71	July 30	Discount	70.8	73.10
June 30	Discount	6.8	57.69	Aug 31	Accounts Receivable	71	131.76
	Accounts Receivable	61	125.00	Sept 30	Wholesale of Sales	65.5	117.1
	Accounts Payable	288	266.472		Discount	73.2	162.3
	Manufacturing	1.1	56.747	Oct 31	Wholesale of Sales	79.1	26.88
July 30	Discount	71	63.5		Discount	79.1	105.63
	Manufacturing	68	349.97	Nov 30	Wholesale of Sales	87.1	38.75
	Accounts Receivable	64	25.00		Discount	68.1	111.7
	Accounts Payable	288	827.446	Dec 31	Manufacturing	69.1	527.83
	Manufacturing	1.1	26.81	Jan 31	Wholesale of Sales	95.1	28.58
Aug 31	Discount	79	71.31		Discount	75.1	193.5
	Accounts Payable	208	315.69.64	Feb 30	Wholesale of Sales	102.1	21.13
	Manufacturing	1.1	10.16		Discount	77.1	192.80
Sept 30	Discount	87.1	78.22	Mar 31	Wholesale of Sales	116.1	64.51
	Accounts Payable	288	223.99.10		Discount	78.1	140.1
	Manufacturing	1.1	50.55.91	Apr 30	Wholesale of Sales	119.1	145.60
Oct 31	Discount	75.22	75.22		Discount	75.1	71.01.88
	Adjustment	69.1	59.13.19	May 31	Wholesale of Sales	127.1	112.04.5
	Accounts Payable	330.1	298.17.75		Discount	127.1	112.04.5
	Manufacturing	1.1	63.82.48	June 30	Wholesale of Sales	79	112.04.5
Nov 30	Discount	103.1	117.5		Discount	81	117.5
	Accounts Payable	240.1	240.00.61	July 31	Wholesale of Sales	83.1	153.85.4
	Manufacturing	1.1	11.57.47		Discount	83.1	153.85.4
Dec 31	Discount	111	67.47	Aug 31	Wholesale of Sales	86	112.04.5
	Accounts Payable	253	43.48.46		Discount	86	112.04.5
	Manufacturing	1.1	87.26.58	Sept 30	Wholesale of Sales	87	112.04.5
Jan 31	Discount	119	63.00		Discount	87	112.04.5
	Accounts Payable	361	31.46.12	Oct 31	Wholesale of Sales	88	112.04.5
	Manufacturing	1.1	17.08.77		Discount	88	112.04.5
Feb 28	Discount	127	54.24	Nov 30	Wholesale of Sales	89	112.04.5
	Accounts Payable	371	73.62.05		Discount	89	112.04.5
	Manufacturing	1.1	67.38.47	Dec 31	Wholesale of Sales	90	112.04.5
	Discount	77	117.5		Discount	90	112.04.5
	Accounts Payable	240	85.41.94.00	Jan 31	Wholesale of Sales	91	112.04.5
	Manufacturing	1.1	89.37.12.40		Discount	91	112.04.5
Mar 31	Balance	112.04.5	112.04.5	Feb 28	Wholesale of Sales	92	112.04.5
	Discount	73.1	15.04.04		Discount	92	112.04.5
	Accounts Payable	288	78.70.69	Mar 31	Wholesale of Sales	93	112.04.5
	Forwarded	125	450.01.85		Discount	93	112.04.5
		453.71.74		Apr 30	Wholesale of Sales	94	112.04.5
					Discount	94	112.04.5
					Accounts Payable	240	85.41.94.00
					Manufacturing	1.1	89.37.12.40
					Discount	77	117.5
					Accounts Payable	240	85.41.94.00
					Manufacturing	1.1	11.57.47
					Discount	103	117.5
					Accounts Payable	240	240.00.61
					Manufacturing	1.1	11.57.47
					Discount	111	67.47
					Accounts Payable	253	43.48.46
					Manufacturing	1.1	87.26.58
					Discount	119	63.00
					Accounts Payable	361	31.46.12
					Manufacturing	1.1	17.08.77
					Discount	127	54.24
					Accounts Payable	371	73.62.05
					Manufacturing	1.1	67.38.47
					Discount	77	117.5
					Accounts Payable	240	85.41.94.00
					Manufacturing	1.1	89.37.12.40
					Discount	103	117.5
					Accounts Payable	240	240.00.61
					Manufacturing	1.1	11.57.47
					Discount	111	67.47
					Accounts Payable	253	43.48.46
					Manufacturing	1.1	87.26.58
					Discount	119	63.00
					Accounts Payable	361	31.46.12
					Manufacturing	1.1	17.08.77
					Discount	127	54.24
					Accounts Payable	371	73.62.05
					Manufacturing	1.1	67.38.47
					Discount	77	117.5
					Accounts Payable	240	85.41.94.00
					Manufacturing	1.1	89.37.12.40
					Discount	103	117.5
					Accounts Payable	240	240.00.61
					Manufacturing	1.1	11.57.47
					Discount	111	67.47
					Accounts Payable	253	43.48.46
					Manufacturing	1.1	87.26.58
					Discount	119	63.00
					Accounts Payable	361	31.46.12
					Manufacturing	1.1	17.08.77
					Discount	127	54.24
					Accounts Payable	371	73.62.05
					Manufacturing	1.1	67.38.47
					Discount	77	117.5
					Accounts Payable	240	85.41.94.00
					Manufacturing	1.1	89.37.12.40
					Discount	103	117.5
					Accounts Payable	240	240.00.61
					Manufacturing	1.1	11.57.47
					Discount	111	67.47
					Accounts Payable	253	43.48.46
					Manufacturing	1.1	87.26.58
					Discount	119	63.00
					Accounts Payable	361	31.46.12
					Manufacturing	1.1	17.08.77
					Discount	127	54.24
					Accounts Payable	371	73.62.05
					Manufacturing	1.1	67.38.47
					Discount	77	117.5
					Accounts Payable	240	85.41.94.00
					Manufacturing	1.1	89.37.12.40
					Discount	103	117.5
					Accounts Payable	240	240.00.61
					Manufacturing	1.1	11.57.47
					Discount	111	67.47
					Accounts Payable	253	43.48.46
					Manufacturing	1.1	87.26.58
					Discount	119	63.00
					Accounts Payable	361	31.46.12
					Manufacturing	1.1	17.08.77
					Discount	127	54.24
					Accounts Payable	371	73.62.05
					Manufacturing	1.1	67.38.47
					Discount	77	117.5
					Accounts Payable	240	85.41.94.00
					Manufacturing	1.1	89.37.12.40
					Discount	103	117.5
					Accounts Payable	240	240.00.61
					Manufacturing	1.1	11.57.47
					Discount	111	67.47
					Accounts Payable	253	43.48.46
					Manufacturing	1.1	87.26.58
					Discount	119	63.00
					Accounts Payable	361	31.46.12
					Manufacturing	1.1	17.08.77
					Discount	127	54.24
					Accounts Payable	371	73.62.05
					Manufacturing	1.1	67.38.47
					Discount	77	117.5
					Accounts Payable	240	85.41.94.00
					Manufacturing	1.1	89.37.12.40
					Discount	103	117.5
					Accounts Payable	240	240.00.61
					Manufacturing	1.1	11.57.47
					Discount	111	67.47
					Accounts Payable	253	43.48.46
					Manufacturing	1.1	87.26.58
					Discount	119	63.00
					Accounts Payable	361	31.46.12
					Manufacturing	1.1	17.08.77
					Discount	127	54.24
					Accounts Payable	371	73.62.05
					Manufacturing	1.1	67.38.47
					Discount	77	117.5
					Accounts Payable	240	85.41.94.00
					Manufacturing	1.1	89.37.12.40
					Discount	103	117.5
					Accounts Payable	240	240.00.61
					Manufacturing	1.1	11.57.47
					Discount	111	67.47
					Accounts Payable	253	43.48.46
					Manufacturing	1.1	87.26.58
					Discount	119	63.00
					Accounts Payable	361	31.46.12
					Manufacturing	1.1	17.08.77
					Discount	127	54.24
					Accounts Payable	371	73.62.05
					Manufacturing	1.1	67.38.47
					Discount	77	117.5
					Accounts Payable	240	85.41.94.00
					Manufacturing	1.1	89.37.12.40
					Discount	103	117.5
					Accounts Payable	240	240.00.61
					Manufacturing	1.1	11.57.47
					Discount	111	67.47
					Accounts Payable	253	43.48.46
					Manufacturing	1.1	87.26.58
					Discount	119	63.00
					Accounts Payable	361	31.46.12
					Manufacturing	1.1	17.08.77
					Discount	127	54.24
					Accounts Payable	371	73.62.05
					Manufacturing	1.1	67.38.47
					Discount	77	117.5
					Accounts Payable	240	85.41.94.00
					Manufacturing	1.1	89.37.12.40
					Discount	103	117.5
					Accounts Payable	240	240.00.61
					Manufacturing	1.1	11.57.47
					Discount	111	67.47
					Accounts Payable	253	43.48.46
					Manufacturing	1.1	87.26.58
					Discount	119	63.00
					Accounts Payable	361	31.46.12
					Manufacturing	1.1	17.08.77
					Discount	127	54.24
					Accounts Payable	371	73.62.05
					Manufacturing	1.1	67.38.47
					Discount	77	117.5
					Accounts Payable	240	85.41.94.00
					Manufacturing	1.1	89.37.12.40
					Discount	103	117.5
					Accounts Payable	240	240.00.61
					Manufacturing	1.1	11.57.47
					Discount	111	67.47
					Accounts Payable	253	43.48.46
					Manufacturing	1.1	87.26.58
					Discount	119	63.00
					Accounts Payable	361	31.46.12
					Manufacturing	1.1	17.08.77
					Discount	127	54.24
					Accounts Payable	371	73.62.05
					Manufacturing	1.1	67.38.47
					Discount	77	117.5
					Accounts Payable	240	85.41.94.00
					Manufacturing	1.1	89.37.12.40
					Discount	103	117.5
					Accounts Payable	240	

General Expense

Sept 1	Forwarded	100	36	170	438	Sept 1	Forwarded	100	105	1678
30	Surpluses	2516	7352	165		30	Abt. of Sales	1316	600	113
	Discount	78	145	02			Discount	78	27	168
	Reg. of Dist.	241	3470	679			Reg. of Dist.	240	33	19
Oct 23	Cash	83	860	00		Oct 31	Abt. of Sales	256	158	150
31	Discount	84	21	57			Discount	84	20	152
	Reg. of Dist.	254	4603	766			Reg. of Dist.	253	55	37
	Surpluses	72	7363	55		Nov 30	Abt. of Sales	372	47	890
	Don't Educate	71	11	35	05		Discount	99	12	75
Nov 30	Reg. of Dist.	266	3856	057		Dec 31	Abt. of Sales	1371	17	101
	Discount	99	74	19	41		Discount	109	17	151
	Surpluses	753	7343	81			Manufacturing	237	33	564
Dec 22	Cash	105	67	61			Accts Payable	261	32	56
31	Reg. of Dist.	387	37152	82		Feb 2	Abt. of Sales	1342	50	550
	Surpluses	758	3452	27			Discount	37	57	103
	Discount	100	47	34			Manufacturing	274	75	538
	Manufacturing	701	33	55			"	276	11	174
Jan 30	Discount	118	18	48			"	277	50	242
	Reg. of Dist.	219	31437	81			"	277	61	118
	Abt. of Sales	1383	3014	40			"	278	366	2278
	Surpluses	759	2707	19			Balance	496	35	
	Manufacturing	760	27	55						
Feb 27	Accts Payable	266	57	00						
	Reg. of Dist.	418	71307	06						
	Manufacturing	76	81101							
	Cash	175	139	67						
	Discount	17	29	44						
	Surpluses	768	2173	55						
	Manufacturing	270	3596							
	"	271	2978	20						
	"	272	81	21						
	Manufacturing	273	61	60	00					
	"	274	237	46						
	"	275	876	339	69					

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General Expense

1915	Mar 1	Balance	493	95	1915	Mar 31	Abstract of Sales	11	457	50	
	31	Reg. of Dist.	457	51	153	70	" Cash Discount	138	7	1376	
		"			102	44	" Return for Wares	202	33	38	
		" Cash Discount	138		56	76	" Reg. of Dist.	446	142	11	
		" Manufacturing	211		38	35					
		" Surpluses			116	19					
		" Non-acc. Mch. Mpty. at 25%			42	99					
	Apr 30	Cash Discount	148		31	23	Apr 30	Abstract of Sales	11	460	77
		" Reg. of Dist.	452		44	75	25	" Cash Discount	148	56	78
		"			10	366	47	" Reg. of Dist.	452	10	3
		" Surpluses	237		152	12		" Cash	442	60	00
	3	Cash	110		54	33	May 31	Abstract of Sales	24	723	27
	30	Manufacturing	237		35	23	" Cash Discount	10	104	53	
					35	23	" Register of Dist.	440	117	56	
	May 31	Cash Discount	10		10	58					
		" Reg. of Dist.	440		33	61					
		"			89	18					
		" Surpluses	233		16	25					
	June 23	Cash	16		37	00	June 30	Reg. of Dist.	449	72	26
	30	Manufacturing	235		10	00	" Abstract of Sales	32	150	26	
		" Reg. of Dist.	449		55	10	" Cash Discount	132	50	78	
		"			93	124	" Manufacturing	237	11	14	
		" Cash Discount	21		43	18					
		" Surpluses	233		12	19	July 31	Cash Discount	28	20	99
	July 31	Cash Discount	28		51		" Abstract of Sales	304	69	09	
		" Manufacturing	241		57	55	" Abstract of Sales	47	40	16	
		" Reg. of Dist.	457		89	15	" Reg. of Dist.	446	20	57	
		"			89	44					
	Aug 31	Manufacturing	241		41	13	Aug 31	Cash Discount	25	20	27
		" Cash Discount	25		25		" Abstract of Sales	357	21	173	
		"			119	44	" Abstract of Sales	62	57	64	
		" Reg. of Dist.	457		53	16	" Reg. of Dist.	446	24	55	
		" Taxes Accrued	913		34	49					
		"			67	44					
		"			44	36					
	Sept 15	Cash	27		07	30	Sept 30	Manufacturing	241	22	27
	30	Manufacturing	241		10	38	" Cash Discount	25	20	27	
		"			44	44	" Abstract of Sales	71	22	27	
		"			44	44					

General Expense

[illegible]

Manufacturing

March 1		Sum. Sundries	37382.306	1907			
31	Acct Payable	3432446.55	17	31	Sundries	3432446.55	100.00
	Manufacturing	3432446.55	37	April 30	"	3432446.55	57.46.61
April 30	Acct Payable	3432446.55	1.60	May 31	"	3432446.55	70.89.35
	Manufacturing	3432446.55	7.5	June 30	General Expense	3432446.55	72.47.44
May 31	"	3432446.55	89.02	"	Sundries	3432446.55	100.00
	Acct Payable	3432446.55	67	July 31	"	3432446.55	72.47.44
June 30	"	3432446.55	67	August 31	"	3432446.55	72.47.44
	Manufacturing	3432446.55	67	September 30	"	3432446.55	72.47.44
July 31	"	3432446.55	67	October 31	"	3432446.55	72.47.44
	Acct Payable	3432446.55	67	November 30	"	3432446.55	72.47.44
August 31	"	3432446.55	67	December 31	Acct Payable	3432446.55	72.47.44
	"	3432446.55	67		Sundries	3432446.55	72.47.44
September 30	Manufacturing	3432446.55	67	January 31	Sundries	3432446.55	72.47.44
October 31	Acct Payable	3432446.55	67	February 29	Sundries	3432446.55	72.47.44
	Manufacturing	3432446.55	67		Acct Payable	3432446.55	72.47.44
November 30	"	3432446.55	67		Acct Payable	3432446.55	72.47.44
	Acct Payable	3432446.55	67		Manufacturing	3432446.55	72.47.44
December 31	"	3432446.55	67		Sundries	3432446.55	72.47.44
	Manufacturing	3432446.55	67		General Expense	3432446.55	72.47.44
January 31	"	3432446.55	67		Manufacturing	3432446.55	72.47.44
February 29	Acct Payable	3432446.55	67		General Expense	3432446.55	72.47.44
	"	3432446.55	67		"	3432446.55	72.47.44
March 1	Acct Payable	3432446.55	67		Sales	3432446.55	72.47.44
	Manufacturing	3432446.55	67		Balance	3432446.55	72.47.44
April 30	General Expense	3432446.55	67				
May 31	Manufacturing	3432446.55	67				
June 30	"	3432446.55	67				
July 31	Acct Payable	3432446.55	67				
August 31	"	3432446.55	67				
September 30	Manufacturing	3432446.55	67				
October 31	"	3432446.55	67				
November 30	General Expense	3432446.55	67				
December 31	"	3432446.55	67				
		3432446.55	67				
1908			1908				
March 1	Balance	3432446.55	March 31	Sundries	3432446.55	1.15.51.90	
31	Manufacturing	3432446.55	April 31	"	3432446.55	3.34.61.22	
	Acct Payable	3432446.55	May 31	"	3432446.55	12.24.00.00	
April 30	"	3432446.55	June 30	"	3432446.55	29.17.00.00	
	Manufacturing	3432446.55	July 31	"	3432446.55	38.07.31.75	
May 31	Acct Payable	3432446.55	August 31	"	3432446.55		
	Manufacturing	3432446.55	September 31	"	3432446.55		
June 30	"	3432446.55	October 31	"	3432446.55		
	Acct Payable	3432446.55	November 31	"	3432446.55		
July 31	Manufacturing	3432446.55	December 31	"	3432446.55		
August 31	Acct Payable	3432446.55	January 31	"	3432446.55		
September 30	"	3432446.55	February 29	"	3432446.55		
October 31	Manufacturing	3432446.55	March 31	"	3432446.55		
November 30	"	3432446.55	April 31	"	3432446.55		
December 31	Acct Payable	3432446.55	May 31	"	3432446.55		
	Manufacturing	3432446.55	June 31	"	3432446.55		
		3432446.55	July 31	"	3432446.55		
		3432446.55	August 31	"	3432446.55		
		3432446.55	September 31	"	3432446.55		
		3432446.55	October 31	"	3432446.55		
		3432446.55	November 31	"	3432446.55		
		3432446.55	December 31	"	3432446.55		

Manufacturing

July 31	Forwarded	129,142,150	July 31	Forwarded	129,142,150
Aug 31	Machinery Tools	71,907,60	Aug 31	Manufacturing	46,36,29,68
	Accts Payable	46,36,29,68	Sept 30	Machinery Tools	19,111,71
	Manufacturing	1,39,30,23		Manufacturing	60,65,16,57
Sept 30	Accts Payable	60,65,16,57	Oct 31	Machinery Tools	20,22,63
	Manufacturing	1,39,30,23		General Expense	1,39,30,23
Oct 31	Accts Payable	77,21,14,24	Nov 30	Manufacturing	55,61,74,23
	Manufacturing	1,39,30,23	Dec 31		
Nov 30	Accts Payable	84,19,71,46	Jan 30		
	Manufacturing	1,46,74,70	Feb 28		
Dec 31	Accts Payable	96,19,63,32	Mar 28		
	Manufacturing	1,39,30,23		Sundries	27,114,49
Jan 30	Accts Payable	107,15,03,52		Accts Payable	120,13,53,92
	Manufacturing	1,39,30,23		Manufacturing	4,67,62
Feb 28	Accts Payable	120,13,53,92			
	Manufacturing	1,39,30,23		Sales	20,116,115
		32,20		Balance	49,144,66
		6,64,22			
		20,116,115			
	General Expense	1,12,69,48			
		1,16,84,95			
		20,116,115			
		3,79,31,66			

1909	Jan 1	Balance	40,146,66,97	Mar 31	Manufacturing	129,177,50,3
	31	Accts Payable	129,177,50,3		Sundries	31,41,81,14
		Manufacturing	1,39,30,23	Apr 30	Manufacturing	140,13,34,71
			31,41,81,14	May 31		150,22,32,74
Apr 30	Accts Payable	140,13,34,71		Jun 30		160,25,32,74
	Manufacturing	1,39,30,23		Jul 31		170,21,52,91
May 31	Accts Payable	150,22,32,74		Aug 31		180,25,17,33
	Manufacturing	1,39,30,23		Sept 30	Forwarded	131,18,38,90
June 30	Accts Payable	160,25,17,33				
	Manufacturing	1,39,30,23				
July 31	Accts Payable	170,21,52,91				
	Manufacturing	1,39,30,23				
Aug 31	Accts Payable	180,25,17,33				
	Manufacturing	1,39,30,23				
Sept 30	Accts Payable	190,21,52,91				
	Manufacturing	1,39,30,23				
	Forwarded	31,19,24,70				

Manufacturing

Sept 30	Forwarded	130,19,24,70	Sept 30	Forwarded	130,19,24,70
Oct 31	Accts Payable	207,24,11,71	Oct 30	Sundries	207,24,11,71
	Manufacturing	1,39,30,23			
Nov 30	Accts Payable	213,10,74,66	Nov 30		
	Manufacturing	1,39,30,23			
Dec 31	Accts Payable	224,28,14,24	Dec 31	General Expense	224,28,14,24
	Manufacturing	1,39,30,23			
Jan 31	Accts Payable	235,15,74,59	Jan 31	Manufacturing	235,15,74,59
	Manufacturing	1,39,30,23			
Feb 28	Accts Payable	247,11,09,09	Feb 28		
	Manufacturing	1,39,30,23			
	General Expense	1,39,30,23			
		7,78,46,40			
		1,55,62,40			
		1,19,30,23			
		3,79,31,66			
		5,82,34,78			
		50,92,73,11			

1910	Mar 1	Balance	907,800,02	Mar 31	Sundries	261,32,378,60
	31	Accts Payable	261,32,378,60	Apr 30		270,24,11,71
		Manufacturing	1,39,30,23	May 31		274,19,24,12
Apr 30	Accts Payable	270,24,11,71		Jun 30		283,15,04,19
	Manufacturing	1,39,30,23		Jul 19	General Expense	6,39,30,23
May 31	Accts Payable	274,19,24,12			Real Estate Building	3,42,64,2
	Manufacturing	1,39,30,23			Sundries	349,19,24,12
June 30	Accts Payable	283,15,04,19		Aug 31	Real Estate Building	6,39,30,23
	Manufacturing	1,39,30,23			Sundries	208,16,69,11
July 31	Accts Payable	298,6,63,04		Sept 30		318,16,69,11
	Manufacturing	1,39,30,23			Sales	6,39,30,23
	Sales	6,39,30,23			Machinery Tools	6,39,30,23
Aug 31	Real Estate Building	6,39,30,23		Oct 31		330,19,24,12
	Accts Payable	308,10,32,15		Nov 30		340,19,24,12
	Manufacturing	1,39,30,23		Dec 31		350,19,24,12
Sept 30	Accts Payable	318,10,32,15		Jan 31	Forwarded	37,24,11,71
	Manufacturing	1,39,30,23				
Oct 31	General Expense	330,19,24,12				
	Accts Payable	330,19,24,12				
	Manufacturing	1,39,30,23				
Nov 30	Accts Payable	340,19,24,12				
	Manufacturing	1,39,30,23				
Dec 31	Accts Payable	350,19,24,12				
	Manufacturing	1,39,30,23				
Jan 31	Forwarded	187,24,11,71				
		2,11,12,38,95				

Manufacturing

Jan 31	Forwarded	131207.01	20588
	General Expense	75.10	188
	Account Payable	561.87	16374
	Manufacturing	19392.15	
Feb 28	Account Payable	374.87	15332
	Manufacturing	7151.01	
	General Expense	75.10	188
	Manufacturing	19392.15	
	"	80.00	67
	"	286.68	
	"	8071.76	
	"	552.73	
	"	81.10	
	General Expense	75.10	188
	Manufacturing	794.47	
	General Expense	75.10	188
	Manufacturing	794.47	
	"	83.13	4404
	General Expense	75.10	188
	Sales	84.14	2400
	General Expense	86.16	3128
	"	408.44	94
	"	4507.15	33

Mar 31	Account Payable	387.20	16586
	Manufacturing	7355.85	
	General Expense	89.11	398.18
	Manufacturing	4611.26	
Apr 27	Account Payable	345.11	6746
	Manufacturing	7055.46	
	"	90.00	67
	"	96.76	32
	"	188.65	7
	"	79.84	79
	"	94.11	75
May 31	General Expense	95.00	115
	Account Payable	471.11	715
	Manufacturing	1245.00	
	Reg. of Dist.	4.00	73
	Forwarded	13311092.38	
	"	13161677	

Manufacturing

June 30	Forwarded	133771511684	
	Manufacturing	974.17	70917
July 31	Account Payable	423.47	67084
	Manufacturing	12676.16	
	Reg. of Dist.	87.92	
Aug 31	Manufacturing	100.00	10000
	Account Payable	411.11	73540
	Manufacturing	15858.01	
	Reg. of Dist.	1147	
	Manufacturing	107.11	27799
	Account Payable	452.86	64539
Sept 30	Manufacturing	14507.95	
	Reg. of Dist.	3258	
	Manufacturing	106.11	26390
Oct 31	Account Payable	107.11	38617
	Manufacturing	466.11	71748
	Reg. of Dist.	391.11	445
	Manufacturing	111.11	51757
Nov 30	Account Payable	476.11	74466
	Manufacturing	160.11	187
	Reg. of Dist.	5369	
	Manufacturing	111.11	51757
Dec 30	Account Payable	436.11	77745
	Manufacturing	707.11	6550
	Reg. of Dist.	6037	
	Manufacturing	116.11	38374
Jan 31	Account Payable	498.11	76197
	Manufacturing	1689.77	
	Reg. of Dist.	5178	
	Manufacturing	116.11	33346
Feb 29	Account Payable	511.11	79077
	Manufacturing	18605.88	
	Reg. of Dist.	4665	
	Manufacturing	118.11	54734
	General Expense	171.11	58525
	Manufacturing	70166.71	
	"	443480	
	"	10774.00	
	"	578151	
	Manufacturing	77.11	131739
	General Expense	133334.95	
	Sales	72.11	91047
	General Expense	72.11	37100
	"	72.11	37100

June 30	Forwarded	133771511684	
	Manufacturing	974.17	70917
July 31	Account Payable	423.47	67084
	Manufacturing	12676.16	
	Reg. of Dist.	87.92	
Aug 31	Manufacturing	100.00	10000
	Account Payable	411.11	73540
	Manufacturing	15858.01	
	Reg. of Dist.	1147	
	Manufacturing	107.11	27799
	Account Payable	452.86	64539
Sept 30	Manufacturing	14507.95	
	Reg. of Dist.	3258	
	Manufacturing	106.11	26390
Oct 31	Account Payable	107.11	38617
	Manufacturing	466.11	71748
	Reg. of Dist.	391.11	445
	Manufacturing	111.11	51757
Nov 30	Account Payable	476.11	74466
	Manufacturing	160.11	187
	Reg. of Dist.	5369	
	Manufacturing	111.11	51757
Dec 30	Account Payable	436.11	77745
	Manufacturing	707.11	6550
	Reg. of Dist.	6037	
	Manufacturing	116.11	38374
Jan 31	Account Payable	498.11	76197
	Manufacturing	1689.77	
	Reg. of Dist.	5178	
	Manufacturing	116.11	33346
Feb 29	Account Payable	511.11	79077
	Manufacturing	18605.88	
	Reg. of Dist.	4665	
	Manufacturing	118.11	54734
	General Expense	171.11	58525
	Manufacturing	70166.71	
	"	443480	
	"	10774.00	
	"	578151	
	Manufacturing	77.11	131739
	General Expense	133334.95	
	Sales	72.11	91047
	General Expense	72.11	37100
	"	72.11	37100

June 30	Forwarded	133771511684	
	Manufacturing	974.17	70917
July 31	Account Payable	423.47	67084
	Manufacturing	12676.16	
	Reg. of Dist.	87.92	
Aug 31	Manufacturing	100.00	10000
	Account Payable	411.11	73540
	Manufacturing	15858.01	
	Reg. of Dist.	1147	
	Manufacturing	107.11	27799
	Account Payable	452.86	64539
Sept 30	Manufacturing	14507.95	
	Reg. of Dist.	3258	
	Manufacturing	106.11	26390
Oct 31	Account Payable	107.11	38617
	Manufacturing	466.11	71748
	Reg. of Dist.	391.11	445
	Manufacturing	111.11	51757
Nov 30	Account Payable	476.11	74466
	Manufacturing	160.11	187
	Reg. of Dist.	5369	
	Manufacturing	111.11	51757
Dec 30	Account Payable	436.11	77745
	Manufacturing	707.11	6550
	Reg. of Dist.	6037	
	Manufacturing	116.11	38374
Jan 31	Account Payable	498.11	76197
	Manufacturing	1689.77	
	Reg. of Dist.	5178	
	Manufacturing	116.11	33346
Feb 29	Account Payable	511.11	79077
	Manufacturing	18605.88	
	Reg. of Dist.	4665	
	Manufacturing	118.11	54734
	General Expense	171.11	58525
	Manufacturing	70166.71	
	"	443480	
	"	10774.00	
	"	578151	
	Manufacturing	77.11	131739
	General Expense	133334.95	
	Sales	72.11	91047
	General Expense	72.11	37100
	"	72.11	37100

Manufacturing

Month	Day	Description	Debit	Credit	Balance
March	1	Balance		119.52	119.52
	30	Accts Payable	98.75	58.58	58.58
		Manufacturing		70.57	70.57
		Reg. of Dist.		46.22	46.22
April	30	Accts Payable	53.21	77.11	77.11
		Manufacturing		70.50	70.50
		Reg. of Dist.		39.51	39.51
May	31	Accts Payable	130.21	27.25	27.25
		Manufacturing	54.61	77.89	77.89
		Reg. of Dist.		167.64	167.64
June	30	Accts Payable	133.55	70.89	70.89
		Manufacturing		62.05	62.05
		Reg. of Dist.		70.91	70.91
July	31	Accts Payable	124.14	18.63	18.63
		Manufacturing	17.91	21.76	21.76
		Reg. of Dist.		195.95	195.95
August	31	Accts Payable	120.52	77.08	77.08
		Manufacturing	116.06	75.50	75.50
		Reg. of Dist.		73.13	73.13
September	30	Accts Payable	140.74	61.51	61.51
		Manufacturing		164.16	164.16
October	30	Accts Payable	36.18	57.96	57.96
		Manufacturing		77.48	77.48
		Reg. of Dist.		13.72	13.72
November	30	Accts Payable	50.12	75.60	75.60
		Manufacturing		73.45	73.45
		Reg. of Dist.		118.5	118.5
December	30	Accts Payable	118.51	117.42	117.42
		Manufacturing	61.42	26.71	26.71
		Reg. of Dist.		78.05	78.05
January	31	Accts Payable	151.70	83.17	83.17
		Manufacturing		149.1	149.1
February	28	Accts Payable	70.14	75.97	75.97
		Manufacturing		37.04	37.04
		Reg. of Dist.		31.27	31.27
March	31	Accts Payable	155.01	119.43	119.43
		Manufacturing	117.76	156.53	156.53
		Forwarded	35.31	108.55	108.55
				259.11	259.11

Manufacturing

Jan 31	Forwarded	131,371	51,174	Jan 31	Forwarded	131,371	51,174
	Manufacturing	89	4,053	Feb 78	Sumdria	1015	36,527
	Reg. of Dist.	"	5313		Manufacturing	1605	17,720
	Manufacturing	157	8,026			1625	9,544
Feb 78	Accl. Payable	10,111	1,507		Chas. of Sales	1735	1,735
	Manufacturing	"	30		Prof. of Sales	1645	1,735
	Reg. of Dist.	"	116		Manufacturing	"	7,045
	Manufacturing	1605	17,720		General Expense	"	4,466
		1625	9,544		Manufacturing	1655	5,601
		1645	8,172		Sumdria	"	2,835
		1655	5,891		Accl. Payable	1015	2,199
	Sumdria	"	5553		Sumdria	1645	2,954
	Manufacturing	1665	11,537		Manufacturing	"	7,514
		"	15,147			1675	2,372
		"	7,070			1685	3,951
		1675	2,372			"	4,474
		"	3,857			1685	1,178
	General Expense	"	4,725			"	1,634
	Manufacturing	"	4,474			1705	5,858
		1685	11,278			"	1,194
	General Expense	"	4,655				
	Manufacturing	"	1,634				
	John R. Edwards	1675	9,582				
	General Expense	1705	5,858				
		315	8,806				
1915.				1912			
March	Balance	11,044	923	March 31	Chas. of Sales	1181	4,435
	Accl. Payable	15,147	30,511		Sumdria	1155	4,435
	Manufacturing	"	3,848		General Expense	1751	1,130
	Reg. of Dist.	"	65		Manufacturing	1765	3,334
	Manufacturing	1765	7,392		Chas. of Sales	1915	3,741
Apr 30	Accl. Payable	725	5,414		Sumdria	1765	5,672
	Manufacturing	"	1,408		General Expense	1785	1,580
	Reg. of Dist.	"	35		Manufacturing	1765	6,807
	Manufacturing	1795	7,797		Chas. of Sales	1995	4,211
	Accl. Payable	3821	53,440		Sumdria	1382	3,499
	Manufacturing	"	3,335		General Expense	1815	3,012
	Reg. of Dist.	"	58		Manufacturing	1825	3,012
	Manufacturing	1845	3,815		Sumdria	1855	2,601
	Accl. Payable	1015	1,507		Chas. of Sales	1905	3,741
	Manufacturing	"	70,070		General Expense	1875	1,634
	Reg. of Dist.	"	465		Manufacturing	"	3,951
	Sumdria	1875	1,993		Forwarded	1267	1,993
	Forwarded	126	1,993				
		126	1,993				

Manufacturing

June 30	2 Forwarded	125,779,127.34	June 30	2 Forwarded	
	Manufacturing	125,779,127.34		Manufacturing	
July 31	Accts Payable	125,779,127.34	July 31	Accts Payable	
	Manufacturing	125,779,127.34		Manufacturing	
	Reg. of Dist.	125,779,127.34		Reg. of Dist.	
	Manufacturing	125,779,127.34		Manufacturing	
Aug 30	Accts Payable	125,779,127.34	Aug 30	Accts Payable	
	Manufacturing	125,779,127.34		Manufacturing	
	Reg. of Dist.	125,779,127.34		Reg. of Dist.	
	Manufacturing	125,779,127.34		Manufacturing	
Sept 30	Accts Payable	125,779,127.34	Sept 30	Accts Payable	
	Manufacturing	125,779,127.34		Manufacturing	
	Reg. of Dist.	125,779,127.34		Reg. of Dist.	
	Manufacturing	125,779,127.34		Manufacturing	
Oct 31	Accts Payable	125,779,127.34	Oct 31	Accts Payable	
	Manufacturing	125,779,127.34		Manufacturing	
	Reg. of Dist.	125,779,127.34		Reg. of Dist.	
	Manufacturing	125,779,127.34		Manufacturing	
Nov 30	Accts Payable	125,779,127.34	Nov 30	Accts Payable	
	Manufacturing	125,779,127.34		Manufacturing	
	Reg. of Dist.	125,779,127.34		Reg. of Dist.	
	Manufacturing	125,779,127.34		Manufacturing	
Dec 31	Accts Payable	125,779,127.34	Dec 31	Accts Payable	
	Manufacturing	125,779,127.34		Manufacturing	
	Reg. of Dist.	125,779,127.34		Reg. of Dist.	
	Manufacturing	125,779,127.34		Manufacturing	
Jan 31	Accts Payable	125,779,127.34	Jan 31	Accts Payable	
	Manufacturing	125,779,127.34		Manufacturing	
	Reg. of Dist.	125,779,127.34		Reg. of Dist.	
	Manufacturing	125,779,127.34		Manufacturing	
Feb 28	Accts Payable	125,779,127.34	Feb 28	Accts Payable	
	Manufacturing	125,779,127.34		Manufacturing	
	Reg. of Dist.	125,779,127.34		Reg. of Dist.	
	Manufacturing	125,779,127.34		Manufacturing	
General Expense			General Expense		

Manufacturing

		Manufacturing			
June 30	Forwarded	136,713,996.29	136,713,996.29	136,713,996.29	136,713,996.29
July 31	Manufacturing	270,455,435	270,455,435	270,455,435	270,455,435
Aug 30	"	" 244,699.89	" 244,699.89	" 244,699.89	" 244,699.89
Sept 30	"	" 19,037.61	" 19,037.61	" 19,037.61	" 19,037.61
Oct 31	General Expense	" 98,053.28	" 98,053.28	" 98,053.28	" 98,053.28
Nov 30	"	221,575,449.66	221,575,449.66	221,575,449.66	221,575,449.66
Dec 31	"	282,023,262.28	282,023,262.28	282,023,262.28	282,023,262.28
				383,836,628	
Jan 31	Balance	377,571.58	377,571.58	377,571.58	377,571.58
Feb 28	Reg. of Dist.	786,751,722	786,751,722	786,751,722	786,751,722
Mar 31	"	789,137,440.23	789,137,440.23	789,137,440.23	789,137,440.23
Apr 30	"	" 1,123,913.31	" 1,123,913.31	" 1,123,913.31	" 1,123,913.31
May 31	Manufacturing	736,115,759.33	736,115,759.33	736,115,759.33	736,115,759.33
June 30	Reg. of Dist.	761,156,322.25	761,156,322.25	761,156,322.25	761,156,322.25
July 31	"	765,233,834.07	765,233,834.07	765,233,834.07	765,233,834.07
Aug 31	"	" 436,627.73	" 436,627.73	" 436,627.73	" 436,627.73
Sept 30	Manufacturing	729,197,579.99	729,197,579.99	729,197,579.99	729,197,579.99
Oct 31	Reg. of Dist.	783,155,531.19	783,155,531.19	783,155,531.19	783,155,531.19
Nov 30	"	" 416,609.15	" 416,609.15	" 416,609.15	" 416,609.15
Dec 31	Manufacturing	781,178,223.37	781,178,223.37	781,178,223.37	781,178,223.37
Jan 31	Reg. of Dist.	781,265,131.41	781,265,131.41	781,265,131.41	781,265,131.41
Feb 28	Manufacturing	731,433,410	731,433,410	731,433,410	731,433,410
Mar 31	Reg. of Dist.	723,667.75	723,667.75	723,667.75	723,667.75
Apr 30	"	726,556,29.86	726,556,29.86	726,556,29.86	726,556,29.86
May 31	"	710,172,028	710,172,028	710,172,028	710,172,028
June 30	Manufacturing	311,187,559.99	311,187,559.99	311,187,559.99	311,187,559.99
July 31	"	" 48,550.66	" 48,550.66	" 48,550.66	" 48,550.66
Aug 31	Manufacturing	738,168,442.26	738,168,442.26	738,168,442.26	738,168,442.26
Sept 30	Reg. of Dist.	741,811,19	741,811,19	741,811,19	741,811,19
Oct 31	"	754,587.32	754,587.32	754,587.32	754,587.32
Nov 30	Manufacturing	355,553,799.6	355,553,799.6	355,553,799.6	355,553,799.6
Dec 31	"	715,115,877	715,115,877	715,115,877	715,115,877
Jan 31	Manufacturing	715,115,877	715,115,877	715,115,877	715,115,877
Feb 28	Reg. of Dist.	340,873.97	340,873.97	340,873.97	340,873.97
Mar 31	"	341,787,993.2	341,787,993.2	341,787,993.2	341,787,993.2
Apr 30	"	" 1,163,116	" 1,163,116	" 1,163,116	" 1,163,116
May 31	"	251,561.37	251,561.37	251,561.37	251,561.37
June 30	Manufacturing	251,158,754.80	251,158,754.80	251,158,754.80	251,158,754.80
July 31	"	251,153,1	251,153,1	251,153,1	251,153,1
Aug 31	Manufacturing	266,101,167	266,101,167	266,101,167	266,101,167
Sept 30	Reg. of Dist.	265,115,449	265,115,449	265,115,449	265,115,449
Oct 31	"	265,115,449	265,115,449	265,115,449	265,115,449
Nov 30	Manufacturing	266,101,167	266,101,167	266,101,167	266,101,167
Dec 31	Reg. of Dist.	265,115,449	265,115,449	265,115,449	265,115,449

Manufacturing

Mar	30	Forwarded	137	534	41,455	Mar	30	Forwarded	137	534	41,455
		Reg of Bkch	366	1,65	33,360	Mar	31	Obt of Sales	397	14,41	1,411
		Manufacturing	257	13	2,571			Reg of Bkch	397	12	2,477
Dec	31	Manufacturing	357	13	2,571			Manufacturing	768	1	1,677
		Reg of Bkch	357	13	2,571			Surveys	767	1	1,677
		Manufacturing	357	13	2,571			Reg of Bkch	767	1	1,677
		General Expense	357	13	2,571			Gen Expense	344	83	5,355
		Reg of Bkch	399	16	2,647			Acct Payable	760	1	3,320
		Obt of Sales	357	13	2,571			Manufacturing	760	1	3,320
		Manufacturing	357	13	2,571			Reg of Bkch	760	1	3,320
		Reg of Bkch	357	13	2,571			Obt of Sales	760	1	3,320
		Obt of Sales	357	13	2,571			Manufacturing	760	1	3,320
		Manufacturing	357	13	2,571			Reg of Bkch	760	1	3,320
		Reg of Bkch	357	13	2,571			Obt of Sales	760	1	3,320
		Obt of Sales	357	13	2,571			Manufacturing	760	1	3,320
		Manufacturing	357	13	2,571			Reg of Bkch	760	1	3,320
		Reg of Bkch	357	13	2,571			Obt of Sales	760	1	3,320
		Obt of Sales	357	13	2,571			Manufacturing	760	1	3,320
		Manufacturing	357	13	2,571			Reg of Bkch	760	1	3,320
		Reg of Bkch	357	13	2,571			Obt of Sales	760	1	3,320
		Obt of Sales	357	13	2,571			Manufacturing	760	1	3,320
		Manufacturing	357	13	2,571			Reg of Bkch	760	1	3,320
		Reg of Bkch	357	13	2,571			Obt of Sales	760	1	3,320
		Obt of Sales	357	13	2,571			Manufacturing	760	1	3,320
		Manufacturing	357	13	2,571			Reg of Bkch	760	1	3,320
		Reg of Bkch	357	13	2,571			Obt of Sales	760	1	3,320
		Obt of Sales	357	13	2,571			Manufacturing	760	1	3,320
		Manufacturing	357	13	2,571			Reg of Bkch	760	1	3,320
		Reg of Bkch	357	13	2,571			Obt of Sales	760	1	3,320
		Obt of Sales	357	13	2,571			Manufacturing	760	1	3,320
		Manufacturing	357	13	2,571			Reg of Bkch	760	1	3,320
		Reg of Bkch	357	13	2,571			Obt of Sales	760	1	3,320
		Obt of Sales	357	13	2,571			Manufacturing	760	1	3,320
		Manufacturing	357	13	2,571			Reg of Bkch	760	1	3,320
		Reg of Bkch	357	13	2,571			Obt of Sales	760	1	3,320
		Obt of Sales	357	13	2,571			Manufacturing	760	1	3,320
		Manufacturing	357	13	2,571			Reg of Bkch	760	1	3,320
		Reg of Bkch	357	13	2,571			Obt of Sales	760	1	3,320
		Obt of Sales	357	13	2,571			Manufacturing	760	1	3,320
		Manufacturing	357	13	2,571			Reg of Bkch	760	1	3,320
		Reg of Bkch	357	13	2,571			Obt of Sales	760	1	3,320
		Obt of Sales	357	13	2,571			Manufacturing	760	1	3,320
		Manufacturing	357	13	2,571			Reg of Bkch	760	1	3,320
		Reg of Bkch	357	13	2,571			Obt of Sales	760	1	3,320
		Obt of Sales	357	13	2,571			Manufacturing	760	1	3,320

Manufacturing

[illegible]

Sales

1913		1912						
July	3764	37334.43	Mo. 31	Accts Receivable	385	248	155	54
"	3765	37410.5	July 30	"	334	22	78	63
"	37726.31	37388	Aug 31	"	338	126	27	35
"	37777.91	37388	July 30	"	349	22	99	55
"	37777.91	37388	July 31	"	349	1	66	58
"	37777.91	37388	Aug 31	"	349	2	5	72
"	37777.91	37388	July 30	"	349	1	66	58
"	37777.91	37388	Aug 31	"	349	1	66	58
"	37777.91	37388	July 30	"	349	1	66	58
"	37777.91	37388	Aug 31	"	349	1	66	58
"	37777.91	37388	July 30	"	349	1	66	58
"	37777.91	37388	Aug 31	"	349	1	66	58
"	37777.91	37388	July 30	"	349	1	66	58
"	37777.91	37388	Aug 31	"	349	1	66	58
"	37777.91	37388	July 30	"	349	1	66	58
"	37777.91	37388	Aug 31	"	349	1	66	58
"	37777.91	37388	July 30	"	349	1	66	58
"	37777.91	37388	Aug 31	"	349	1	66	58
"	37777.91	37388	July 30	"	349	1	66	58
"	37777.91	37388	Aug 31	"	349	1	66	58
"	37777.91	37388	July 30	"	349	1	66	58
"	37777.91	37388	Aug 31	"	349	1	66	58
"	37777.91	37388	July 30	"	349	1	66	58
"	37777.91	37388	Aug 31	"	349	1	66	58
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"	37777.91	37388	July 30	"	349	1	66	58
"	37777.91	37388	Aug 31	"	349	1	66	58
"	37777.91	37388	July 30	"	349	1	66	58
"	37777.91	37388	Aug 31	"	349	1	66	58
"	377							

*Scrap Account**Mar. 31, Acc'd. Payable*

cash

1897
March 1 From General Ledger 31
April 30 20 281 00
May 31 29 268 00
June 30 38 240 25
July 31 47 270 50
Aug 31 56 300 00
Sept 30 64 320 00
Oct 31 73 340 00
Nov 30 81 360 00
Dec 31 90 380 00
Jan 31 99 400 00
Feb 29 107 420 00

1897
March 31 20 281 00
April 30 29 268 00
May 31 38 240 25
June 30 47 270 50
July 31 56 300 00
Aug 31 64 320 00
Sept 30 73 340 00
Oct 31 81 360 00
Nov 30 90 380 00
Dec 31 99 400 00
Jan 31 107 420 00
Feb 29 115 440 00

1897
March 31 20 281 00
April 30 29 268 00
May 31 38 240 25
June 30 47 270 50
July 31 56 300 00
Aug 31 64 320 00
Sept 30 73 340 00
Oct 31 81 360 00
Nov 30 90 380 00
Dec 31 99 400 00
Jan 31 107 420 00
Feb 29 115 440 00

Balance

327 05 51

1908
March 1 Balance 31
April 30 36 399 59
May 31 45 420 00
June 30 54 440 00
July 31 62 460 00
Aug 31 71 480 00
Sept 30 80 500 00
Oct 31 88 520 00
Nov 30 97 540 00
Dec 31 106 560 00
Jan 31 115 580 00
Feb 29 124 600 00

1908
March 31 36 399 59
April 30 45 420 00
May 31 54 440 00
June 30 62 460 00
July 31 71 480 00
Aug 31 80 500 00
Sept 30 88 520 00
Oct 31 97 540 00
Nov 30 106 560 00
Dec 31 115 580 00
Jan 31 124 600 00
Feb 29 133 620 00

1908
March 31 36 399 59
April 30 45 420 00
May 31 54 440 00
June 30 62 460 00
July 31 71 480 00
Aug 31 80 500 00
Sept 30 88 520 00
Oct 31 97 540 00
Nov 30 106 560 00
Dec 31 115 580 00
Jan 31 124 600 00
Feb 29 133 620 00

Balance

327 05 51

1909
March 1 Balance 31
April 30 125 144 17
May 31 134 164 12
June 30 143 184 07
July 31 152 203 92
Aug 31 161 223 87
Sept 30 170 243 82
Oct 31 179 263 77
Nov 30 188 283 72
Dec 31 197 303 67
Jan 31 206 323 62
Feb 29 215 343 57

1909
March 31 125 144 17
April 30 134 164 12
May 31 143 184 07
June 30 152 203 92
July 31 161 223 87
Aug 31 170 243 82
Sept 30 179 263 77
Oct 31 188 283 72
Nov 30 197 303 67
Dec 31 206 323 62
Jan 31 215 343 57
Feb 29 224 363 52

1909
March 31 125 144 17
April 30 134 164 12
May 31 143 184 07
June 30 152 203 92
July 31 161 223 87
Aug 31 170 243 82
Sept 30 179 263 77
Oct 31 188 283 72
Nov 30 197 303 67
Dec 31 206 323 62
Jan 31 215 343 57
Feb 29 224 363 52

Balance

327 05 51

Cash

[illegible]

911	911
High	High
31	31
Balance	237.38.55
Cash	
136.153.89.76	High
144.115.325.20	High
2.174.85.34	High
11.139.036.23	High
18.161.275.88	High
26.159.719.95	High
34.11.431.18	High
43.142.33.83	High
52.285.91.74	High
60.117.811.85	High
69.155.000.03	High
78.167.192.7	High
186.35.85.06	High

[illegible]

Cash

Cash	37	1	20	1	33
	46	1	8	1	46
	51	1	9	1	51
	63	1	0	1	63
	61	1	5	1	61
	71	1	2	1	71
	79	1	1	1	79
	87	1	0	1	87
	95	1	9	1	95
	103	1	6	1	103
	111	1	5	1	111
	119	1	0	1	119
	127	1	0	1	127
name					
	135	1	0	1	135
	143	1	0	1	143

Cash

136, 158 127 15
 141, 162 195 21
 22, 52 319 6
 112, 65 199 19
 183, 192 204 29
 26, 178 168 3
 32, 114 499 7
 43, 28 148 5
 52, 259 369 26
 60, 148 295 55
 69, 36 105 0
 78, 169 53 10
 101, 210 1

Cash

1	86	134	09	718
"	96	163	07	338
"	105	180	01	447
"	114	123	02	44
"	123	125	03	50
"	132	177	03	09
"	141	145	04	43
"	151	197	04	65
"	111	118	07	19
"	21	22	06	50
"	31	21	08	26
"	41	21	06	40
may	101	123	03	54
		123	04	41

Cash

Month	Day	Balance	1910	1911	1912	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	2925	2926	2927	2928	2929	2930	2931	2932	2933	2934	2935	2936	2937	2938	2939	2940	2941	2942	2943	2944	2945	2946	2947	2948	2949	2950	2951	2952	2953	2954	2955	2956	2957	2958	2959	2960	2961	2962	2963	2964	2965	2966	2967	2968	2969	2970	2971	2972	2973	2974	2975	2976	2977	2978	2979	2980	2981	2982	2983	2984	2985	2986	2987	2988	2989	2990	2991	2992	2993	2994	2995	2996	2997	2998	2999	3000
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Balance

Month	Day	Balance	Debit	Credit	Month	Day	Balance	Debit	Credit
Apr	30	Cash 49.00	210.21	49.00	Apr	30	210.21	49.00	49.00
May	29	" 100.00	110.21	100.00	May	31	110.21	100.00	100.00
June	30	" 100.00	50.78	100.00	June	30	50.78	100.00	100.00
July	31	" 100.00	59.22	100.00	July	31	59.22	100.00	100.00
Aug	31	" 100.00	50.00	100.00	Aug	31	50.00	100.00	100.00
Sept	30	" 100.00	78.74	100.00	Sept	30	78.74	100.00	100.00
Oct	31	" 100.00	84.70	100.00	Oct	31	84.70	100.00	100.00
Nov	30	" 100.00	99.21	100.00	Nov	30	99.21	100.00	100.00
Dec	31	" 100.00	0.00	100.00	Dec	31	0.00	100.00	100.00
Jan	31	" 100.00	116.21	100.00	Jan	31	116.21	100.00	100.00
Feb	29	" 100.00	171.50	100.00	Feb	29	171.50	100.00	100.00
			228.51	228.51					

Balance

ms			1915	ms	
Mrs	1	Bacayes	3675597	1915	May 31
May	31	Laak	131 376 55546	Cpl	30
Apr	30	"	142 376 55592	May	31
May	31	"	10 32 140 19	June	30
June	30	"	2 31 32 37	July	31
July	31	"	28 32 32 11	Aug	31
Aug	31	"	3 31 32 11	Sept	30
Sept	30	"	4 31 32 11	Oct	31
Oct	31	"	5 31 32 55	Nov	30
Nov	30	"	6 31 32 55	Dec	29
Dec	29	"	7 31 32 55	Jan	31
Jan	31	"	8 31 32 55	Feb	28
Feb	28	"	9 31 32 55	Mar	31
Mar	31	"	10 31 32 55	Apr	30
Apr	30	"	11 31 32 55	May	31
May	31	"	12 31 32 55	June	30
June	30	"	13 31 32 55	July	31
July	31	"	14 31 32 55	Aug	31
Aug	31	"	15 31 32 55	Sept	30
Sept	30	"	16 31 32 55	Oct	31
Oct	31	"	17 31 32 55	Nov	30
Nov	30	"	18 31 32 55	Dec	29
Dec	29	"	19 31 32 55	Jan	31
Jan	31	"	20 31 32 55	Feb	28
Feb	28	"	21 31 32 55	Mar	31
Mar	31	"	22 31 32 55	Apr	30
Apr	30	"	23 31 32 55	May	31
May	31	"	24 31 32 55	June	30
June	30	"	25 31 32 55	July	31
July	31	"	26 31 32 55	Aug	31
Aug	31	"	27 31 32 55	Sept	30
Sept	30	"	28 31 32 55	Oct	31
Oct	31	"	29 31 32 55	Nov	30
Nov	30	"	30 31 32 55	Dec	29
Dec	29	"	31 31 32 55	Jan	31

Cash

cash	51	147	95770
"	61	271	152941
"	71	279	90122
"	80	277	27222
"	89	117	20112
"	98	113	13671
"	107	174	16861
"	118	201	29791
"	126	203	29067
"	139	170	13343
"	140	248	11372
"	107	239	22578
balance	51	147	95770

Cash

	21	186	70580
Cash	32	266	21825
	41	215	9875
	50	70	126288
	54	59	87992
	64	231	57297
	78	72	71870
	84	73	52644
	94	198	28
	109	274	4418
	118	209	98755
	121	312	71138
Balance			3623197
			283919239

base

back	138	241434.71
"	144	331133.71
"	10	411133.66
"	21	771133.66
"	28	111133.66
"	35	66587.13
"	47	111133.66
"	50	111133.66
"	2	441133.66
"	22	111133.66
"	16	111133.66
"	21	111133.66
"	32	111133.66
"	15	111133.66

Bond Interest

1897	Aug 2	Unpaid Bond Interest	549	6000.00	Feb 27	Capital & Loan	74	12300.00
	Feb 29		249	6000.00				12300.00
				12300.00				12300.00
1898	Aug 2	Unpaid Bond Interest	18	6000.00	Feb 27	Profit & Loss	29	11700.00
	Feb 2		26	5700.00				11700.00
				11700.00				11700.00
1899	Aug 2	Unpaid Bond Interest	38	5700.00	Feb 28	Profit & Loss	51	11100.00
	Feb 1		49	5400.00				11100.00
				11100.00				11100.00
1900	Aug 2	Unpaid Bond Interest	65	5400.00	Feb 28	Profit & Loss	78	10500.00
	Feb 1		76	5100.00				10500.00
				10500.00				10500.00
1901	Aug 2	Unpaid Bond Interest	101	5100.00	Feb 29	Profit & Loss	120	9900.00
	Feb 1		117	4800.00				9900.00
				9900.00				9900.00
1902	Aug 2	Unpaid Bond Interest	140	4800.00	Feb 28	Profit & Loss	168	9300.00
	Feb 2		159	4500.00				9300.00
				9300.00				9300.00
1910	Aug 2	Unpaid Bond Interest	191	4500.00	Feb 28	Profit & Loss	215	8700.00
	Feb 2		216	4200.00				8700.00
				8700.00				8700.00
1912	Aug 2	Unpaid Bond Interest	240	4200.00	Feb 27	Profit & Loss	275	8100.00
	Feb 2		268	3900.00				8100.00
				8100.00				8100.00
1916	Aug 2	Unpaid Bond Int.	266	3900.00	Feb 29	Capital & Loan	369	7500.00
	Feb 29		310	3600.00				7500.00
				7500.00				7500.00

Accrued Interest on Bonds.

1914
 Feb 29 Profit & Loss... 303 600.00

Am. of Gov. Bonds to
 G. E. & S.

Accrued Pay Roll

1912
July 29. Prof. & Lou. 383 137.77

Dec. 1912 79. Amount to
be paid

Unpaid Bond Interest

1909			1909			1909		
Mar 2	Cash	112	50.00	Mar 1	From General Ledger	3	270.00	
5	"	"	35.00	Aug 2	Bond Interest	269	2,300.00	
14	"	134	175.00	Oct 29	"	369	6,000.00	
30	"	141	75.00					
Aug 7	"	57	175.00					
"	"	"	175.00					
"	"	"	250.00					
"	"	"	250.00					
"	"	"	365.00					
"	"	"	175.00					
"	"	"	200.00					
"	"	"	100.00					
"	"	"	25.00					
15	"	59	50.00					
26	"	60	175.00					
13	"	65	25.00					
30	"	69	175.00					
Oct 12	"	75	175.00					
20	"	10	25.00					
Dec 13	"	"	25.00					
"	"	"	50.00					
"	"	"	50.00					
6	"	"	50.00					
7	"	"	50.00					
8	"	"	75.00					
12	"	"	100.00					
20	"	"	175.00					
24	"	121	75.00					
"	"	"	1,175.00					
	Balance		1,000.00					
			12,475.00				12,475.00	
1911				1911				
Mar 9	Cash	19	7,500.00	Mar 1	Balance		650.00	
18	"	"	2,500.00	Aug 25	Forwarded	210	6,650.00	
16	"	"	500.00					
Aug 4	"	56	25.00					
6	"	"	125.00					
7	"	"	25.00					
10	"	"	50.00					
11	"	"	1,000.00					
14	"	"	3,125.00					
20	"	57	1,500.00					
24	"	"	500.00					
25	"	"	25.00					
"	Forwarded	210	7,500.00				7,500.00	

Unpaid Bond Interest

Aug 25	Forwarded	6650.00	Aug 25	Forwarded	8550.00	
Sept 11	Cash	63	750.00	Sept 15	Forwarded	6000.00
Oct 7		72	500.00	Oct 26	Forwarded	3700.00
9			750.00			
11		10	1575.00			
12			1250.00			
13			500.00			
14			1250.00			
15		100	2850.00			
17			500.00			
20		114	300.00			
27			750.00			
Balance			112550.00			112550.00
Aug 9	Cash	158	200.00	Aug 1	Balance	100.00
16		160	1250.00	Aug 7	Bond Interest	5700.00
20		164	500.00	Aug 1	Forwarded	5400.00
27		162	250.00			
Sept 11		167	3350.00			
17		169	250.00			
Oct 15		178	1575.00			
20			50.00			
23		172	750.00			
Nov 2		185	200.00			
9			75.98			
Dec 1		19	3075.00			
4			125.00			
7			50.00			
10			100.00			
14		21	150.00			
16		22	250.00			
28	Forwarded		11200.00			11200.00
Mar 12	Cash	304	250.00	Mar 1	Balance	11700.00
17		314	500.00	Aug 1	Bond Interest	5400.00
55		55	1500.00	Aug 10	Forwarded	34750.00
July 1		62	1575.00			
Aug 5			250.00			
8		72	1575.00			
10			1000.00			
Forwarded			106750.00			106750.00

Unpaid Bond Interest

Aug 10	Forwarded	34250.00	Aug 10	Forwarded	7100.00	
	Cash	72	1750.00	Feb 1	Bond Interest	5100.00
19	"	74	250.00			
27	"	75	3050.00			
Sept 20	"	83	500.00			
Oct 7	"	88	750.00			
27	"	91	250.00			
29	"	"	750.00			
Nov 15	"	96	250.00			
Dec 7	"	120	750.00			
3	"	"	1575.00			
"	"	"	2750.00			
"	"	"	75.00			
6	"	"	50.00			
7	"	"	250.00			
9	"	"	100.00			
21	"	125	75.00			
23	"	"	75.00			
28	Balance	"	50.00			
			17700.00			17700.00
Mar 16	Cash	130	500.00	Mar 1	Balance	500.00
June 9	"	3	7124.38	Aug 7	Bond Interest	5100.00
Jan 9	Jan Expense	95	7062.50	Sept 7	"	4900.00
Aug 7	Cash	64	750.00			
19	"	19	1575.00			
Feb 1	"	"	575.00			
3	"	70	575.00			
20	"	71	750.00			
28	"	"	1575.00			
			9050.00			9050.00
May 15	Cash	109	7150.00	May 7	Bond Interest	4800.00
June 5	"	124	575.00	Sept 3	"	4500.00
14	"	127	750.00			
6	"	124	1575.00			
3	"	324	575.00			
13	"	34	1575.00			
18	"	35	750.00			
20	"	36	1650.00			
25	"	"	50.00			
			9300.00			9300.00

Unpaid Bond Interest

Aug 6	Cash	901	1501.00	Aug 1	Bond Interest	1912	4500.00
"	"	"	71150.00	Feb 2	"	2112	4700.00
"	"	"	7155.00				
Oct 14	"	108	1575.00				
Set 3	"	1	1575.00				
" 5	"	"	1575.00				
" 10	"	"	2150.00				
			7300.00				
			9700.00				9700.00

Aug 7	Cash	601	7500.00	Aug 1	Bond Interest	760	4700.00
Set 8	"	61	2150.00	Feb 7	"	768	3900.00
Set 27	"	70	1575.00				
		126	1575.00				
	Balance		2325.00				
			8100.00				8100.00

Apr 3	Cash	139	20750.00	Mar 1	Balance		2325.00
	"	"	2500.00	Aug 3	Bond Interest	Feb	3600.00
Aug 9	"	29	5500.00	Feb 29	"	Feb	3600.00
" 13	"	"	2500.00				
Set 2	"	30	1575.00				
" 11	"	25	1575.00				
			2500.00				
			9150.00				9150.00

Dividend Account

1917

1918

May 20 Accounts Payable	337.5	60.18.00	Feb 27 Portland Gas	374	120.36.00
Aug 20	249.1	60.64.00			
		120.82.00			120.82.00

Fire Insurance Claims

Date	Description	Amount
Feb 27	Fire Loss No. 16109948	16109948
May 27	Balance	16109948
May 1	Balance	16109948
Feb 27	Fire Loss No. 16109948	16109948

Edison Phonograph Works 5% Good Bonds

1897	Aug 7	Cash	57	1000.00	1897	March 1	From General Ledger	2215000.00
	"	"	"	1000.00				
	"	"	"	7000.00				
	"	"	"	1000.00				
	"	Balance		250000.00				250000.00
1908	Aug 14	Cash	56	12000.00	1908	March 1	Balance	2400000.00
	Feb 27	Balance		2280000.00				2400000.00
				2400000.00				2400000.00
1899	Aug 22	Cash	179	120000.00	1899	Nov 1	Balance	2280000.00
	Feb 28	Balance		216000.00				2280000.00
				2280000.00				2280000.00
1910	Nov 30	Cash	99	120000.00	1910	Nov 1	Balance	216000.00
	Feb 28	Balance		204000.00				216000.00
				216000.00				216000.00
1911	June 13	Cash	5	119150.00	1911	Nov 1	Balance	204000.00
	"	From Expense	95	119150.00				204000.00
	Feb 28	Balance		204000.00				204000.00
1912	Feb 21	Cash	36	120000.00	1912	Nov 1	Balance	192000.00
	"	Balance		180000.00				192000.00
				192000.00				192000.00
1913	Jan 31	Cash	146	90000.00	1913	Nov 1	Balance	180000.00
	"	"	"	90000.00				180000.00
	Feb 28	Balance		180000.00				180000.00
1914	Feb 22	Balance		180000.00	1914	Nov 1	Balance	168000.00
1915	July 8	Cash	22	120000.00	1915	Nov 1	Balance	160000.00
	"	"	"	120000.00				160000.00
	Feb 11	From Gen'l Ledger	15	160000.00				160000.00
				160000.00				160000.00

Furniture & Fixtures

1907			1908				
March 1	From General Ledger	3.00	67.50	Apr 30	Balance	362.41	336.21
31	Accts Payable	489.96	447.32	30	Accts Payable	371.12	123.65
	Manufacturing		11.57		Expenses		1.02
April 30	Accts Payable	438.25	447.32				
	Manufacturing						
May 31		339.81	457.75				
	Accts Payable						
June 30		250.11	512.93				
	Manufacturing						
July 31		346.81	512.93				
	Accts Payable						
Aug 31		277.81	512.93				
	Manufacturing						
Sept 30		346.81	512.93				
	Accts Payable						
Oct 31		277.81	512.93				
	Manufacturing						
Nov 30		277.81	512.93				
	Accts Payable						
Dec 31		346.81	512.93				
	Manufacturing						
1908							
Mod 1	Balance	100.00	Apr 30	General Expense	9.42		
31	Manufacturing	166.20	Apr 30	General Expense	24.02	69.607	
	Accts Payable	166.20					
Feb 30		166.20					
	Manufacturing	166.20					
May 30	Accts Payable	166.20					
	Manufacturing	166.20					
June 30	Accts Payable	166.20					
	Manufacturing	166.20					
July 31	Accts Payable	166.20					
	Manufacturing	166.20					
Aug 31	Accts Payable	166.20					
	Manufacturing	166.20					
Sept 30	Accts Payable	166.20					
	Manufacturing	166.20					
Oct 31	Accts Payable	166.20					
	Manufacturing	166.20					
Nov 30	Accts Payable	166.20					
	Manufacturing	166.20					
Dec 31	Accts Payable	166.20					
	Manufacturing	166.20					
1909							
Jan 1	Balance	100.00	Apr 30	General Expense	9.42		
31	Manufacturing	166.20	Apr 30	General Expense	24.02	69.607	
	Accts Payable	166.20					
Feb 30		166.20					
	Manufacturing	166.20					
May 30	Accts Payable	166.20					
	Manufacturing	166.20					
June 30	Accts Payable	166.20					
	Manufacturing	166.20					
July 31	Accts Payable	166.20					
	Manufacturing	166.20					
Aug 31	Accts Payable	166.20					
	Manufacturing	166.20					
Sept 30	Accts Payable	166.20					
	Manufacturing	166.20					
Oct 31	Accts Payable	166.20					
	Manufacturing	166.20					
Nov 30	Accts Payable	166.20					
	Manufacturing	166.20					
Dec 31	Accts Payable	166.20					
	Manufacturing	166.20					

Furniture & Fixtures

1908		1909		1910			
Sept 30	Forwarded	239.4	744.92	Jan 31	Forwarded	239.4	744.92
Oct 31	Account Payable	72.5	444.18	Feb 28	Profit & Loss	308.7	7659.10
	Manufacturing	11.50	11.50		Balance		100
Nov 30	Accts Payable	52.4	101.00				
	Manufacturing		148.86				
Dec 31	Accts Payable	96.1	503.2				
	Manufacturing		10.30				
Jan 31	Accts Payable	107.1	32.50				
	Manufacturing		1.44				
Feb 28	Accts Payable	120.1	6.10				
	Manufacturing		16.75				
			155.02				1756.02
1909							
Mar 1	Balance		100	1910			
Apr 30	Accts Payable	140.1	197.7	Jan 28	Profit & Loss	50.1	197.42
May 31		150.1	29.15		Balance		100
June 30		168	18.99				
July 31		151.4	20.50				
Aug 31		228	8.99				
Sept 30		237	3.00				
Oct 28		249	79.00				
			178.42				178.42
1910							
Nov 1	Balance		100	Nov 30	Account Payable	340.1	42.76
Dec 31	Account Payable	261.1	169.95	Dec 31	Profit & Loss	73	504.39
	Manufacturing		74.2	Jan 31	Forwarded	74.1	519.11
Jan 30	Accts Payable	270.4	63.02				
	Manufacturing		14.28				
Feb 31	Account Payable	279.1	24.66				
	Manufacturing		11.49				
Mar 30	Account Payable	288	500				
Apr 31		308	7.50				
	Manufacturing		9.74				
May 31	Accts Payable	318.7	170.47				
	Manufacturing		27.1				
June 30	Accts Payable	330.1	26.75				
	Manufacturing		59				
July 30		340.1	0.07				
Aug 31	Account Payable	353	22.16				
	Manufacturing		17.50				
Sept 31	Forwarded	74.1	542.11				
			1097.78				1097.78

Furniture & Fixtures

Jan 31	Forwarded	240.1	549.14	Jan 31	Forwarded	240.1	549.14
	Account Payable	361	70.87	Feb 28	Profit & Loss	88	607.51
	Manufacturing		68		Balance		100
Feb 28	Account Payable	374	58.73				
	Manufacturing		7.23				
			611.65				611.65
1909							
Mar 31	Balance		100	May 31	Account Payable	407.1	33.53
Apr 29	Accts Payable	245.1	75.09	Sept 30	Acct of Sales	92.1	49.99
	Manufacturing		4.41	Oct 31		99.1	199.1
May 31		407.1	10.16	Nov 30	Profit & Loss	113.1	184.29
June 30	Accts Payable	417.1	58.99	Dec 29	Balance	125	316.77
	Manufacturing		55.3				100
July 31	Accts Payable	427.1	76.47				
	Manufacturing		8.70				
Aug 31	Accts Payable	441.1	5.12				
	Manufacturing		2.40				
Sept 30	Accts Payable	453.1	100.43				
	Manufacturing		16.25				
Oct 31	Accts Payable	466.1	19.85				
	Manufacturing		15.26				
Nov 30	Accts Payable	476.1	33.17				
	Manufacturing		71.35				
Dec 30	Accts Payable	486.1	11.65				
	Manufacturing		49.18				
Jan 31	Accts Payable	498.1	636.39				
	Manufacturing		142.07				
Feb 29	Accts Payable	511.1	71.67				
	Manufacturing		17.25				
			476.69				476.69
1910							
Mar 31	Balance		100	May 31	Accts Payable	546.1	319.61
Apr 30	Accts Payable	522.1	86.59	Aug 31	Forwarded	74.1	305.77
	Manufacturing		15.15				
May 20	Accts Payable	532.1	304.65				
	Manufacturing		17.27				
June 31		541.1	38.14				
July 29	Accts Payable	555.1	708.10				
	Manufacturing		60.74				
Aug 31	Account Payable	567.1	481.60				
	Manufacturing		77.13				
Sept 31	Account Payable	573.1	78.25				
	Manufacturing		51.61				
Oct 31	Forwarded	74.1	337.13				
			337.13				337.13

Furniture & Fixtures

Aug 31	Forwarded	241	3054.71	Aug 31	Forwarded	241	3054.71
Sept 30	Manufacturing	72.	146.47	Nov 30	Obli. of Sales	114.54	5700.00
Oct 31	Account Payable	36.	173.05	Dec 31	Profit Loss	155.7	3817.83
	Manufacturing	"	75.76	Jan 31	Obli. of Sales	116.2	718.36
Oct 31	Account Payable	50.	560.74	Feb 28	Balance		5011.67
	Manufacturing	"	35.62				
Nov 30	Account Payable	61.	149.05				
	Manufacturing	"	15.49				
Dec 31	Account Payable	76.	245.77				
	Manufacturing	"	33.73				
Jan 31	Acct Payable	89.	269.20				
	Manufacturing	"	132.29				
	Reg of Dist	"	46.				
Feb 28	Acct Payable	101.	270.67				
	Manufacturing	"	125.47				
	Acct Payable	"	170.00				
	Manufacturing	166.	118.16				
	Profit Loss	171.	216.79				
			782.124				782.124
			19.3				
31	Acct Payable	15.	560.30	July 31	Obli. of Sales	1071	50.91
	Manufacturing	"	42.64	Dec 31	Profit Loss	208.	3460.84
Apr 30	Acct Payable	135.	370.14	Feb 28	Balance	223.	1147.28
	Manufacturing	"	71.31				1600.18
May 31	Acct Payable	136.	181.07				
	Manufacturing	"	119.77				
June 30	Acct Payable	145.	185.90				
	Manufacturing	"	22.64				
July 31	Acct Payable	150.	111.00				
	Manufacturing	"	16.				
Aug 30	Acct Payable	147.	108.00				
Sept 30	Acct Payable	164.	111.10				
Oct 31	"	174.	57.89				
Nov 20	"	186.	29.75				
Dec 31	"	197.	21.12				
Jan 31	"	207.	19.7				
Feb 28	"	216.	11.99				
		231.	109.55				
			2524.89				2524.89
			19.6				
Mar 31	Balance	269.	4601.89				
	Reg of Dist		37.				

Furniture & Fixtures

Apr 30	Forwarded	212	461.13	Jan 30	Reg of Dist	219	3.50
	Reg of Dist	26.2	16.99		Acct Payable	26.	382.79
May 29	"	27.2	1.65	Feb 27	Balance		13120.66
June 30	"	27.6	11.89				
July 31	"	31.1	12.35				
Aug 31	"	37.5	15.13				
Sept 30	"	34.	11.74				
Oct 31	"	35.4	14.75				
Nov 31	"	38.2	57.14				
	Manufacturing	207	150.57				
Dec 27	Reg of Dist	41.8	125.00				
	Manufacturing	220	176.12				17661.86
			13120.66				
			195				
Mar 1	Balance		13120.66	July 31	Reg. of Dist	517.	51.35
Apr 30	Reg of Dist	437.	149.19	Dec 31	Obli. of Sales	114.	58.44
May 31	"	470.	634.56	Jan 31	Obli. of Sales	116.	77.45
June 30	"	479.	65.00				
			101.				
Aug 31	"	587.	81.75	Feb 29	Obli. of Sales	116.	58.19
Sept 30	"	574.	124.45		Reg of Dist	276.	381.45
Oct 31	"	574.	124.45		Balance		2524.89
Nov 30	"	574.	124.45				
Dec 31	"	610.	124.45				
Jan 31	"	637.	124.45				
Feb 29	"	637.	124.45				
			2524.89				2524.89

Machinery & Tools

1908	Sept 30	Forwarded	2494	2494
Oct 31	Manufacturing	200	2494	1908
	Account Payable	72	2422	
	Manufacturing	72	2494	
Nov 30	Accts Payable	84	2410	
	Manufacturing	11	2421	
Dec 31	Accts Payable	96	2426	
	Manufacturing	14	2440	
Jan 30	Accts Payable	107	2450	
	Manufacturing	11	2461	
Feb 27	Accts Payable	129	2480	
	Manufacturing	27	2507	
		2507	2507	
		4490	1111	

1909	Mar 1	Balance	4404	3882
	31	Accts Payable	129	623
		Manufacturing	98	525
			31	256
Apr 30	Accts Payable	140	1011	32
	Manufacturing	18	1029	
May 31	Accts Payable	100	1129	
	Manufacturing	11	1140	
June 30	Accts Payable	160	1300	
	Manufacturing	11	1311	
July 31	Accts Payable	174	1475	
	Manufacturing	11	1486	
Aug 31	Accts Payable	181	1656	
	Manufacturing	11	1667	
Sept 30	Accts Payable	190	1857	
Oct 30	Accts Payable	205	2062	
	Manufacturing	11	2073	
Nov 30	Accts Payable	218	2281	
	Manufacturing	11	2292	
Dec 31	Accts Payable	226	2518	
	Manufacturing	11	2529	
Jan 31	Accts Payable	236	2755	
	Manufacturing	11	2766	
Feb 28	Accts Payable	249	3005	
	Manufacturing	11	3016	
	Forwarded	251	3267	
		4490	1111	

Machinery & Tools

1908	Sept 28	Forwarded	250	4190
	Manufacturing	249	4439	
	Profit Loss	52	4491	
	Balance	417	10432	
1909	Mar 1	Balance	375	20108
	Accts Payable	261	20369	
	Manufacturing	14	20383	
Apr 30	Accts Payable	270	20653	
	Manufacturing	13	20666	
May 31	Accts Payable	279	20935	
	Manufacturing	11	20946	
June 30	Accts Payable	288	21223	
	Manufacturing	11	21234	
July 30	Accts Payable	298	21521	
	Manufacturing	11	21532	
Aug 31	Accts Payable	308	21820	
	Manufacturing	11	21831	
Sept 30	Accts Payable	318	22119	
Oct 1	Manufacturing	69	22188	
31	Accts Payable	330	22518	
	Manufacturing	11	22529	
Nov 30	Accts Payable	340	22868	
Dec 31	Accts Payable	352	23220	
	Manufacturing	11	23231	
Jan 31	Accts Payable	361	23581	
Feb 28	Accts Payable	371	23952	
	Manufacturing	11	23963	
	Forwarded	318	27141	
		4490	1111	
1910	Mar 1	Balance	343	4475
	Accts Payable	398	4873	
	Manufacturing	11	4884	
Apr 29	Accts Payable	395	5279	
	Manufacturing	11	5290	
May 31	Accts Payable	407	5706	
	Manufacturing	11	5717	
June 30	Accts Payable	417	6123	
	Manufacturing	11	6134	
July 31	Accts Payable	428	6551	
	Manufacturing	11	6562	
Aug 21	Forwarded	345	6907	
		4490	1111	

Machinery & Tools

Aug 31	Forwarded	751.31	121.55	Aug 31	Forwarded	751.31	121.55
	Acct Payable	4114	579.11	Dec 30	Profit Loss	1121	78.28
	Manufacturing	"	1.09	Feb 29	Acct Payable	5111	55.55
Sept 30	Acct Payable	455	41.18		Profit Loss	175	28.28
Oct 31	"	461	45.38		Balance	131	11.52
Nov 30	"	476	54.38				
Dec 30	"	484	65.17				
	Manufacturing	"	7.18				
	Reg of Dist	"	1.57				
Jan 31	Acct Payable	488	101.02				
	Manufacturing	"	10.94				
Feb 29		511	32.25				
		348	768.35			348	768.35
Mar 31	Acct Payable	507	758.11	Apr 30	Profit Loss	1554	350.11
	Manufacturing	"	44.55	Jan 31	Acct of Sales	1162	17.72
April 30	Acct Payable	533	340.14	Oct 28	Sales	1594	21.73
	Manufacturing	"	17.38		Profit Loss	171	85.58
May 31	Acct Payable	546	474.66		Forwarded	753	259.43
	Manufacturing	"	34.73				
	Undivided Tool	"	1.09				
June 29	Reg of Dist	555	747.47				
	Undivided Tool	"	61.78				
July 31	Acct Payable	72	137.67				
	Manufacturing	"	66.53				
Aug 31	Acct Payable	73	145.15				
	Manufacturing	"	20.15				
	Undivided Tool	"	7.0				
Sept 30	Acct Payable	36	76.69				
	Manufacturing	"	78.11				
Oct 31	Acct Payable	50	19.15				
	Manufacturing	"	50.37				
	Undivided Tool	"	7.84				
Nov 30	Acct Payable	61	589.66				
	Manufacturing	"	71.84				
Dec 31	Acct Payable	76	37.40				
	Manufacturing	"	119.29				
Jan 31	Acct Payable	89	155.42				
	Manufacturing	"	146.41				
Feb 28	Acct Payable	101	613.05				
	Manufacturing	"	11.59				
	Forwarded	753	259.43				
		32	561.63				

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Machinery & Tools

Feb 28	Forwarded	753	259.43	Feb 28	Forwarded	753	259.43
	Manufacturing	166	11.75		Balance	359	13.29
		359	13.29				
Mar 1	Balance	373	49.71	June 30	Acct of Sales	1241	200
31	Acct Payable	155	195.41	Sept 30		1261	295.66
	Manufacturing	"	88.71	Oct 31	Profit Loss	208	303.85
Apr 30	Acct Payable	178	161.07	Feb 28	Balance	223	643.69
	Manufacturing	"	61.27				
May 31	Acct Payable	138	51.55				
	Manufacturing	"	5.06				
June 30	Acct Payable	146	11.07				
	Manufacturing	"	88.73				
July 31	Acct Payable	161	172.12				
	Manufacturing	"	8.82				
Aug 30	Acct Payable	164	191.15				
	Manufacturing	"	58.75				
Sept 30	Acct Payable	174	91.71				
	Manufacturing	"	7.86				
Oct 31	Acct Payable	186	242.60				
	Manufacturing	"	31.70				
Nov 29	Acct Payable	197	35.26				
	Manufacturing	"	6.94				
Dec 31	Acct Payable	207	591.05				
	Manufacturing	"	5.73				
Jan 31	Acct Payable	221	1132.26				
	Manufacturing	"	87.10				
Feb 28	Acct Payable	236	753.20				
	Manufacturing	"	41.11				
		368	1750				
Mar 2	Balance	331	1086.21	June 30	Reg of Dist	294	37.27
31	Reg of Dist	249	1780.59	Sept 30		341	152.5
		"	67.11		Forwarded	753	259.43
Apr 30	"	262	659.57				
	"	"	57				
May 29	"	278	235.104				
	"	"	148				
June 30	"	294	1100.74				
July 31	"	311	1785.19				
Aug 31	"	325	346.85				
	"	"	339				
	Forward	368	1247				
		264	1587				

30457872

Edison Storage Battery Co, Interest Account.

404									
Oct 31	Accts Payable	117.	1018097	Nov 31	Edison Stor Batts Co	161.	1070270		
126	31		1018097						
			1018097						
			1070270				1070270		

Real Estate & Buildings

Aug 31	Forwarded	4274	11	474	May 31	Forwarded	4274	11	474
Sept 30	Accts Payable	60	11	372	June 30	Accts Payable	107	11	603
Oct 31	"	72	11	187	July 31	Accts Payable	129	11	608
	Manufacturing			1375		Balance			4274
Nov 30	Accts Payable	84	11	702					
Dec 31	"	96	11	709					
Jan 31	"	120	11	576					
Feb 27	"			42608					

Mar 1	Balance	4274	11	360	Mar 31	Accts Payable	129	11	9000
					Aug 31	"	184	11	900
					Sept 30	Balance			426327
									42547630

July 19	Balance	4274	11	360	July 30	Accts Payable	248	11	3838
Aug 31	Accts Payable	288	11	146	Aug 31	Manufacturing	60	11	3475
Sept 30	Manufacturing	60	11	324	Sept 30	Balance			4274
Oct 31	"	60	11	324					
Nov 30	"	298	11	327					
Dec 31	"	60	11	324					
Jan 31	Accts Payable	36	11	177					
Feb 27	"	37	11	2008					
				42746705					426766705

Mar 1	Balance	4274	11	360	Oct 31	Forwarded	4274	11	474
Apr 30	Accts Payable	288	11	146					
May 31	Manufacturing	60	11	156					
June 30	Accts Payable	298	11	84					
July 31	Manufacturing	407	11	70					
Aug 31	Accts Payable	417	11	79					
Sept 30	Manufacturing			89					
Oct 31	Reg. of Dist.			91					
Nov 30	Accts Payable	479	11	75					
Dec 31	Manufacturing			125					
Jan 31	Accts Payable	479	11	588					
Feb 27	Manufacturing			111					
Mar 31	Accts Payable	479	11	700					
Apr 30	Manufacturing			737					
May 31	Accts Payable	479	11	602					
June 30	Manufacturing			111					
July 31	Accts Payable	479	11	111					

Real Estate & Buildings

Oct 31	Forwarded	4274	11	474	Oct 31	Forwarded	4274	11	474
Nov 30	Accts Payable	446	11	178	Nov 30	Accts Payable	446	11	178
Dec 31	"	446	11	178	Dec 31	"	446	11	178
Jan 31	Manufacturing			446	Jan 31	Manufacturing			446
Feb 27	Accts Payable	446	11	858	Feb 27	Accts Payable	446	11	858
	Manufacturing			16		Manufacturing			16

Mar 1	Balance	4274	11	360	Mar 31	Accts Payable	511	11	11572
Apr 30	Accts Payable	511	11	11572	Apr 30	"	511	11	11572
May 31	"	511	11	11572	May 31	"	511	11	11572
June 30	"	511	11	11572	June 30	"	511	11	11572
July 31	"	511	11	11572	July 31	"	511	11	11572
Aug 31	"	511	11	11572	Aug 31	"	511	11	11572
Sept 30	"	511	11	11572	Sept 30	"	511	11	11572
Oct 31	"	511	11	11572	Oct 31	"	511	11	11572
Nov 30	"	511	11	11572	Nov 30	"	511	11	11572
Dec 31	"	511	11	11572	Dec 31	"	511	11	11572
Jan 31	"	511	11	11572	Jan 31	"	511	11	11572
Feb 27	"	511	11	11572	Feb 27	"	511	11	11572
				40892931					40892931

Mar 1	Balance	4274	11	360	Mar 31	Accts Payable	138	11	171
Apr 30	Accts Payable	138	11	171	Apr 30	"	138	11	171
May 31	"	138	11	171	May 31	"	138	11	171
June 30	"	138	11	171	June 30	"	138	11	171
July 31	"	138	11	171	July 31	"	138	11	171
Aug 31	"	138	11	171	Aug 31	"	138	11	171
Sept 30	"	138	11	171	Sept 30	"	138	11	171
Oct 31	"	138	11	171	Oct 31	"	138	11	171
Nov 30	"	138	11	171	Nov 30	"	138	11	171
Dec 31	"	138	11	171	Dec 31	"	138	11	171
Jan 31	"	138	11	171	Jan 31	"	138	11	171
Feb 27	"	138	11	171	Feb 27	"	138	11	171
				41692337					41692337

Mar 1	Balance	4274	11	360	Mar 31	Accts Payable	4274	11	360
Apr 30	Accts Payable	4274	11	360	Apr 30	"	4274	11	360
May 31	"	4274	11	360	May 31	"	4274	11	360
June 30	"	4274	11	360	June 30	"	4274	11	360
July 31	"	4274	11	360	July 31	"	4274	11	360
Aug 31	"	4274	11	360	Aug 31	"	4274	11	360
Sept 30	"	4274	11	360	Sept 30	"	4274	11	360
Oct 31	"	4274	11	360	Oct 31	"	4274	11	360
Nov 30	"	4274	11	360	Nov 30	"	4274	11	360
Dec 31	"	4274	11	360	Dec 31	"	4274	11	360
Jan 31	"	4274	11	360	Jan 31	"	4274	11	360
Feb 27	"	4274	11	360	Feb 27	"	4274	11	360
				42676772					42676772

Mar 1	Balance	4274	11	360	Mar 31	Accts Payable	4274	11	360
Apr 30	Accts Payable	4274	11	360	Apr 30	"	4274	11	360
May 31	"	4274	11	360	May 31	"	4274	11	360
June 30	"	4274	11	360	June 30	"	4274	11	360
July 31	"	4274	11	360	July 31	"	4274	11	360
Aug 31	"	4274	11	360	Aug 31	"	4274	11	360
Sept 30	"	4274	11	360	Sept 30	"	4274	11	360
Oct 31	"	4274	11	360	Oct 31	"	4274	11	360
Nov 30	"	4274	11	360	Nov 30	"	4274	11	360
Dec 31	"	4274	11	360	Dec 31	"	4274	11	360
Jan 31	"	4274	11	360	Jan 31	"	4274	11	360
Feb 27	"	4274	11	360	Feb 27	"	4274	11	360
				42676772					42676772

Dates. Mfg. Co. Stock Account

¹⁹¹⁶ Jul '29	Prof. Co. Loan	277.	50000.00	¹⁹¹⁶ Jul '29	Thor. Co. Loan	277.	25000.00
	Three Assets		100				
			25000.00				25000.00

Profit & Loss

1913	Feb 78	Forwarded	779	4061283	Feb 78	Forwarded	779	4061283
		Accts Receivable	162	4947		Sales	779	4061283
		Manufacturing	162	170858				
		Swindlers	168	22803				
		" 434	171	73287				
		Pro. 1913		8011156				
				96518178				96518178
43	Feb 78	Swindlers	708	3484504	Feb 78	Swindlers	708	3484504
		Manufacturing	715	982366		Accts Receivable	731	750000
		Accts Receivable	715	94		Unclaimed Wages	731	1000
		Swindlers	14	75930		Sales	731	1000
		Accts Payable	246	8840				
		Manufacturing	218	176600				
		Accts Receivable	218	4487				
		Swindlers	223	10370				
		Pro. 1913		117144547				
				123448048				123448048

1913	Feb 78	Accts Receivable	769	6000	1913	Feb 78	Accts Receivable	769	6000
		Payable	769	582			Unclaimed Wages	769	129742
		Manufacturing	773	102856			Swindlers	769	110000
		Swindlers	715	81000			Pro. 1913		450000
		Automobile Acc.	279	5000					
		Loss Loss		151164164					
				151164164					151164164
1913	Feb 78	Balance		7055590	1913	Feb 78	Balance		7055590
				9048858					9048858
				16104848					16104848

1913	Feb 78	Good Interest	369	70000	1913	Feb 78	Good Interest	369	70000
		Bottom		51401106			Unclaimed Wages	372	129742
		Manufacturing		30000			Fire Loss	372	1271210
		Accts Receivable	374	2546			Accts Payable	374	100000
		Swindlers	378	4517691			Pro. 1913		100000
		Manufacturing		2711501					
		Accts Receivable		2711501					
				2711501					2711501

108120189

Profit and Loss

1916	Feb 29	Accts Rec. & Bkgs.	383	2208513	1916	Feb 29	Forwarded	2208513
		Accused in on Bonds		60000				
		Accused Pay Rec.		137179+				
		Accused Taxes	374	90000+				
		Return for Bad Debt		307750+				
				164422				

PAID 1000000

1000000

Special Account A

Aug 31 ¹⁹⁵⁹ Notice Receivable 17, 2000.00 June 6 Notice Receivable 36, 2000.00

Fidelity Trust Co. Life Insurance Account

1917									
July 1	Cash	44.4	98.14.18		Balance			11/100.25	
"	"	"	"		"			"	
Oct. 30	"	10.4	108.0.53						
			6.64						
			111.22.28						
1918								11/100.25	
March 1	Balance		111.00.25	1918					
Apr. 30	Cash	27.1	138.1.34	July 7	Cash	44.1	182.2.12		
June 30	Insurance	12.1	150.0.55						
			1129.1.12					1129.1.12	

Liability Insurance Reserve Fund

(1907)				(1908)			
Oct. 31	Accts Payable	357.41	519.75	July 31	Accounts Payable	345.	1280.52
Nov. 30	"	1.460.21	123.00	"	"	"	"
Dec. 31	"	1.565.	75.40	"	"	"	"
Jan. 31	"	466.	41.79	Feb. 29	Accounts Payable	369.	151.55
Feb. 29	"	1.371.	44.84	"	"	"	"
"	Exp. Expense	1.373.	12.50	"	"	"	"
"	Balance		61.19	"	"	"	"
			1256.07				1256.07
1908				1908			
May 30	Accts Payable	12.	5763	March 1	Balance		466.89
June 30	Accts Payable	13.	5774	June 30	Accounts Payable	29.	730.71
"	Li. Res. Reserve Fund	20.	5807				
			589.66				589.66

No more postings to be made to this a/c

Reserve for Water

116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569
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Reserve for Water

[illegible]

Fire Insurance Reserve Fund

1917

Oct 15 Transf. to Res. Fund 2018	9000	May 21 Accts Payable 1917	9814.18
Sept 17 Accts Payable 1918	1476.36		
Balance	5237.82		
	9814.18		9814.18
June 30 Trans. to Res. Fund 1918	5205.14	March 1 Balance	5237.82
		Apr 20 Accts Payable 1918	732
	8235.14		5235.14

no more entries to be made to this a/c.

Savage

1907								
Dec 31	Acct Payable	36rs.	50000		Balance		50000	
1908								
Mar 1	Balance		50000		Acct Payable	12	24771	
					Profit & Loss	29	25129	
			50000				50000	

Goodwin Mfg Co. Settlement

1911
Nov 30 Accts Payable 110° 104 66 17 Feb 29 Profit Loss 170° 104 66 17

1898

Insurance Bureau Fund

June 30	Insurance Expense	14°	300	June 30	Profit Loss	10°	183 55
July 31	Accts Payable	38°	46 90	July 31	Insurance Expense	14°	183 55
Aug 31	"	31°	18 90	Aug 31	Accts Payable	38°	183 55
Sept 30	"	46°	24 24	Sept 30	Insurance Expense	14°	183 55
Oct 31	"	60°	24 24	Oct 31	Accts Payable	38°	183 55
Nov 30	"	72°	14 72	Nov 30	Insurance Expense	14°	183 55
Dec 31	"	84°	24 84	Dec 31	Accts Payable	38°	183 55
Jan 31	"	96°	24 96	Jan 31	Insurance Expense	14°	183 55
Feb 28	"	120°	24 120	Feb 28	Accts Payable	38°	183 55
		28°	24 28				
		120°	36 120				
	Balance		21206 10				

Mar	31	Accts Payable	129°	73 14	Mar	31	Balance	20280 00	
Apr	30		140°	28 50	Apr	30	Accts Payable	129°	150 00
May	31	Insurance Expense	35°	236 00	May	31	Insurance Expense	35°	150 00
		Accts Payable	150°	189 50			Accts Payable	140°	150 00
June	30		160°	172 14	June	30	Accts Payable	150°	150 00
July	31		172°	172 50	July	31	Accts Payable	160°	150 00
Aug	31		184°	200 00	Aug	31	Accts Payable	172°	150 00
Sept	30		213°	200 00	Sept	30	Accts Payable	184°	150 00
Oct	31		225°	174 47	Oct	31	Accts Payable	193°	150 00
Nov	30		46°	21 11	Nov	30	Accts Payable	9°	150 00
Jan	31		237°	27 00	Jan	31	Accts Payable	10°	150 00
Feb	28		249°	52 00			Accts Payable	47°	150 00
		Balance		32193 45					32193 45

1910					1910			
Mar	31	Accounts Payable	241 6	60 00	Mar	1	Balance	302 47 5
30			270 6	16 50	Mar	1	Accts Payable	38 250 00
Apr	30		279 4	28 75	Apr	14	National Phone Co	59 210 32 5
May	19	Insurance Bureau Bonds	59 4	96 00	May	31	Accounts Payable	66 416 64 8
		Insurance Bureau Fund	59 4	27 00	May	31	Accts Payable	111 10 42 2
June	30	Accounts Payable	288	24 24	June	16		115 98 00 0
Aug	30		308	24 24	Aug	31		149 1 68 4
Sept	30		318	24 24	Sept	7 8		177 10 00 0 0
Oct	31		330	24 24				28 19 2 24
Nov	31		352	24 24				
Dec	31		361	24 24				
Jan	28		374	24 24				
Feb		Balance	5730 32					5730 32 5

Insurance Reserve Fund.

[illegible][illegible]

Insurance Reserve Fund.

July 31	Accts Payable	31	1011.25	July 31	Balance		2067.50
Aug 31		910	1011.25				
			2067.50				
1200			2067.50				2067.50
Jan 1	Balance		2067.50	July 31	Balance		2067.50
Jan 1	Accts Payable		1011.25				
			3067.50				3067.50
1910							
May 1	Balance		3067.50	May 19	National Trust Co	v9	29.67
					Home Bank		6.62
			3067.50				3067.50

Borrowed from Insurance Reserve Fund

1910	Jan 16	Cash	117	98,888.32	1910	May 17	Insurance Reserve Fund	60	27,888.32
	Feb 28	Balance	174	10,000.00					
				10,000.00					
				79,888.32					79,888.32
1911	Apr 21	Cash	141	10,000.00	1911	May 1	Balance		10,000.00
	Feb 26	Balance	74	15,000.00		Nov 9	Cash	45	75,000.00
				15,000.00					
				35,000.00					35,000.00
1912	May 15	Cash	87	10,000.00	1912	Feb 1	Balance		10,000.00
	Feb 28	Balance	87	15,000.00		Dec 30	Cash	70	75,000.00
				15,000.00		Jan 8		23	70,000.00
				55,000.00					55,000.00
1913	May 29	Profit 15000	277	45,000.00	1913	May 1	Balance		45,000.00

Edison Storage Battery Co.

1910	Dec 31	Accounts Payable	44	39,147.11	1910	Feb 28	Balance		46,316.97
	Jan 31		47	1,286.43					
	Feb 28		57	4,205.00					
				46,316.97					46,316.97
1911	Mar 1	Balance		46,316.97	1911	Feb 28	Balance		101,652.82
	Apr 30	Accounts Payable	56	2,904.24					
	May 31		57	2,700.00					
	June 30		58	1,552.11					
	July 31		61	1,301.79					
	Aug 31		64	1,405.64					
	Sept 30		66	1,300.71					
	Oct 31		67	1,384.48					
	Nov 30		70	1,093.78					
	Dec 31		71	857.65					
	Jan 31		72	1,524.42					
	Feb 28		74	557.08					
			79	1,076.46					111,652.82
				111,652.82					
1911	Mar 1	Balance		111,652.82	1911	Jan 31	Sales	115	10
	Apr 30	Accounts Payable	89	7,861.18		Feb 28	Balance		7,107.66
	May 31		91	8,880.99					
	June 30		93	10,257.06					
	July 31		96	8,339.61					
	Aug 31		99	7,907.25					
	Sept 30		101	8,587.79					
	Oct 31		105	8,776.74					
	Nov 30		108	7,800.44					
	Dec 31		110	6,652.50					
	Jan 31		113	6,241.88					
	Feb 28		115	10,561.46					
	Mar 31		119	8,339.61					
	Apr 30		123	8,318.61					71,076.66
				71,076.66					
1912	Mar 1	Balance		71,076.66	1912	May 31	Accts Payable	132	8,656.93
	Apr 30	Accts Payable	126	1,111.28		July 31		138	4,701.46
	May 31		127	2,374.38		Aug 31		142	27,079.04
	June 30		133	2,786.11		Sept 28	Notes Receivable	55	75,000.00
	July 31		134	1,635.71				56	75,000.00
	Aug 30		140	1,351.43				57	75,000.00
	Sept 31	Accts Receivable	141	1,706.23				58	75,000.00
	Oct 31	Forwarded	146	37,034.11		Oct 31	Forwarded	37	37,034.11
				37,034.11					

Edison Storage Battery Co.

Oct 31	Forwarded	311	14067.12	Oct 31	Forwarded	311	14067.12
	Accts Payable	147	9517.73	Nov 8	Note Receivable	57	25000.00
Nov 30	Accts Receivable	149	5793.14			58	25000.00
	Accts Payable	150	5793.14			59	25000.00
Dec 31	Accts Receivable	153	1855.8			60	25000.00
	Payable	154	1855.79			61	25000.00
	Edison Storage Battery Co.		10207.10			62	25000.00
Jan 31	Accts Receivable	156	677.10			63	25000.00
	Accts Payable	157	519.97			64	25000.00
			32.36			65	25000.00
Feb 28	Accts Receivable	163	1498.1			66	25000.00
	Accts Payable	164	496.08			67	25000.00
			47.22			68	25000.00
			26355.84			69	25000.00

Mar 31	Forwarded	70	580.46	May 17	Note Receivable	66	15000.00
	Accts Payable	174	2823.68			67	10000.00
			52.37			68	10000.00
	Accts Receivable	175	271.61			69	10000.00
Apr 30	Accts Payable	177	2076.14			70	10000.00
			61.41			71	10000.00
	Accts Receivable	178	701.29			72	10000.00
May 31	Accts Payable	181	1345.88			73	10000.00
			74.09			74	10000.00
	Receivable	183	123.84			75	10000.00
June 30	Payable	185	1153.22			76	10000.00
	Receivable	186	227.08			77	10000.00
July 31	Payable	188	3.94			78	10000.00
	Receivable		126.71			79	10000.00
Aug 30		191	174.19			80	10000.00
	Payable	194	141.43			81	10000.00
Sept 30		195	1806.84			82	10000.00
	Receivable	197	207.09			83	10000.00
Oct 31	Accts Payable	200	2196.47			84	10000.00
	Accts Receivable		126.89			85	10000.00
Nov 30	Accts Payable	203	4162.16			86	10000.00
			87.77			87	10000.00
	Accts Receivable		143.95			88	10000.00
Dec 31	Accts Payable	206	3145.74			89	10000.00
			27.11			90	10000.00
	Accts Receivable	207	89.89			91	10000.00
Jan 31	Accts Payable	211	2766.03			92	10000.00
			10.84			93	10000.00

Edison Storage Battery Co.

Jan 31	Forwarded	311	14067.12	Feb 28	Forwarded	311	14067.12
	Accts Receivable	212	453.34			312	14067.12
Feb 28	Accts Payable	216	2279.85			313	14067.12
			52.14			314	14067.12
			60832.63			315	14067.12
Mar 31	Forwarded	311	14067.12	Mar 31	Forwarded	311	14067.12
	Accts Receivable	212	453.34			312	14067.12
Apr 30	Accts Payable	216	2279.85			313	14067.12
			52.14			314	14067.12
			60832.63			315	14067.12
May 31	Forwarded	311	14067.12	May 31	Forwarded	311	14067.12
	Accts Receivable	212	453.34			312	14067.12
Jun 30	Accts Payable	216	2279.85			313	14067.12
			52.14			314	14067.12
			60832.63			315	14067.12
Jul 31	Forwarded	311	14067.12	Jul 31	Forwarded	311	14067.12
	Accts Receivable	212	453.34			312	14067.12
Aug 31	Accts Payable	216	2279.85			313	14067.12
			52.14			314	14067.12
			60832.63			315	14067.12
Sep 30	Forwarded	311	14067.12	Sep 30	Forwarded	311	14067.12
	Accts Receivable	212	453.34			312	14067.12
Oct 31	Accts Payable	216	2279.85			313	14067.12
			52.14			314	14067.12
			60832.63			315	14067.12
Nov 30	Forwarded	311	14067.12	Nov 30	Forwarded	311	14067.12
	Accts Receivable	212	453.34			312	14067.12
Dec 31	Accts Payable	216	2279.85			313	14067.12
			52.14			314	14067.12
			60832.63			315	14067.12
Jan 31	Forwarded	311	14067.12	Jan 31	Forwarded	311	14067.12
	Accts Receivable	212	453.34			312	14067.12
Feb 28	Accts Payable	216	2279.85			313	14067.12
			52.14			314	14067.12
			60832.63			315	14067.12

Edison Manufacturing Co.

Jan 31	Accts Receivable	48	13098.26	Dec 31	Accts Receivable	45	129699.77
Feb 28	Balance	49	20638.66				
			120699.77				120699.77
1910				1910			
Mar 31	Accts Receivable	56	11071.75	Mar 31	Balance		77461.55
Apr 30	"	62	2891.86	Apr 30	Accts Receivable	57	10068.29
May 31	"	66	20872.09	May 31	"	59	10288.20
June 30	"	68	18243.96	June 30	"	60	10987.39
July 31	"	70	11265.69	July 31	"	71	10182.24
Aug 31	"	72	12510.50	Aug 31	Balance		12567.16
Sept 30	"	75	19694.53				
Oct 31	"	78	28677.89				
Nov 30	"		116107.25				116107.25
1911				1911			
Dec 31	Balance		2267.16	Dec 31	Thomas Edison Inc	89	17267.16

Thomas A. Edison Inc. Orange, N.J.

1911	31	Debit Payable	901	75	1911	1	Summaries	89	993	1050
1911	30	Debit Receivable	1134	200	1911	31	Debit Receivable	90	1000	91
Feb	29	"	772	105	1911	29	"	91	25	193
"	"	Sales	1721	107	1911	31	"	92	647	1072
"	"	Balance	755	11	1911	30	"	96	558	1044
"	"	"			1911	31	"	99	24	107
"	"	"			1911	31	"	107	34	108
"	"	"			1911	31	"	103	21	108
"	"	"			1911	31	"	108	11	108
"	"	"			1911	30	"	111	7	108
"	"	"			1911	31	"	116	50	108
"	"	"			1911	31	"	118	53	108
"	"	"			1911	31	"	118	53	108

1911	31	Debit Receivable	121	540	1911	1	Balance	75	11	108
May	30	Debit Receivable	142	100	1911	30	Debit Receivable	75	11	108
Oct	31	Debit Payable	147	78	1911	30	"	75	11	108
Nov	30	Debit Receivable	149	100	1911	31	"	75	11	108
"	30	Debit Receivable	"	11	1911	31	"	75	11	108
"	31	Debit Payable	150	478	1911	31	"	75	11	108
"	31	Debit Receivable	152	278	1911	31	"	75	11	108
"	31	Debit Payable	154	117	1911	31	"	75	11	108
Jan	31	Debit Receivable	156	107	1911	31	"	75	11	108
"	31	Debit Payable	157	138	1911	31	"	75	11	108
Feb	28	Debit Receivable	161	544	1911	31	"	75	11	108
"	"	Sales	"	113	1911	31	"	75	11	108
"	"	Debit Payable	164	200	1911	31	"	75	11	108
"	"	Receivable	165	151	1911	31	"	75	11	108
"	"	Debit Payable	168	17	1911	31	"	75	11	108
"	"	Sales	169	11	1911	31	"	75	11	108
"	"	"	"	17	1911	31	"	75	11	108
"	"	Balance	"	113	1911	31	"	75	11	108
"	"	"	"	113	1911	31	"	75	11	108

1912	31	Debit Receivable	74	960	1912	1	Balance	89	993	1050
"	31	Debit Payable	"	151	1912	31	Debit Receivable	75	11	108
Apr	30	"	77	14	1912	30	"	75	11	108
May	31	Debit Receivable	180	250	1912	31	"	75	11	108
"	31	Debit Payable	181	123	1912	31	"	75	11	108
June	30	"	182	111	1912	31	"	75	11	108
July	31	"	183	111	1912	31	"	75	11	108
Aug	31	"	184	111	1912	31	"	75	11	108
Sept	30	"	185	111	1912	31	"	75	11	108
"	31	Receivable	187	150	1912	31	"	75	11	108
Oct	31	Forwarded	188	111	1912	31	"	75	11	108
"	31	"	189	111	1912	31	"	75	11	108

Edison Business Photographs

1900											
Jan	31	Credit Receipts	188	4048	1900	Dec 31	Accounts Receivable	45	17048	90	
Feb	28		49	19150	1901	Jan 28	Balance		10000	00	
				17248	85				17248	85	
1900											
Mar	1	Balance		17248	1900	Apr 30	Credit Receipts	57	11109		
	31	Accounts Receivable	564	12899	1900	May 31		59	12340	56	
June	30		672	13571	1900	June 30		68	12779	31	
July	31		64	14215	1900	July 31		70	13211	17	
Aug	31		66	14881	1900	Aug 31		71	13568	88	
Sept	28		78	15669	1900	Sept 31		72	13979	78	
				38558	16	1900	Oct 31		75	14511	94
						1900	Nov 28	Balance		14511	94
1901	Dec 1	Balance		14511	1901	Jan 1	Balance		14511	94	
Feb	1	Balance		19254	01	1901	Feb 1	Thomas A. Edison	89	19564	01

Taxes Accrued.

[illegible]

1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100
1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	20																																																																																																			

1913		1914		1915	
March 31	1438.62	March 31	1785	March 31	1438.62
April 30	1331.00	April 30	1784	April 30	1331.00
May 31	1331.00	May 31	1864	May 31	1331.00
June 30	1504.91	June 30	1921	June 30	1504.91
July 31	1504.91	July 31	1971	July 31	1504.91
Aug 31	1504.91	Aug 31	1991	Aug 31	1504.91
Sept 30	1504.91	Sept 30	2003	Sept 30	1504.91
Oct 31	1504.91	Oct 31	2015	Oct 31	1504.91
Nov 30	1504.91	Nov 30	2115	Nov 30	1504.91
Dec 31	1504.91	Dec 31	2115	Dec 31	1504.91
Balance	1504.91	Balance	2115	Balance	1504.91

9/11/39		9/11/39		9/11/39
Mch	2	Bad James for building material	37	03.70
	31	Reg of Bush	17	89.00

Tapes Accrued

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National Phonograph Co.

1899	Dec 28	Accts Receivable	49	29981.77	1899	Dec 31	Accts Receivable	45	279097.90
		Sales	52	124988.87	1900	Jan 31		48	572567.2
		Balance		2811.95					436333.62
				436333.62					
1900	Mar 31	Accts Receivable	56	10807.21	1900	Mar 1	Balance		231417.95
	Apr 30		57	64730.28		May 31	Accts Receivable	59	132446.4
	May 19	Thomas Edison Bonds	59	29675.00		June 30		62	49971.2
		Thomas Edison Bonds	61	29532.32		July 30		64	240570.9
	Sept 30	Accts Receivable	68	25829.68		Aug 31		66	719544.4
	Oct 31		70	39577.16		Sept 30		75	166773.8
	Nov 30		71	38951.34		Oct 31		78	159336.6
	Dec 31		72	48456.67			Sales	85	1165510.3
	July 28	Sales	82	166581.93					
		Thomas Edison Bonds	86	10500.00					
		Sales	87	111067.06					
		Balance		130911.67					
				595306.44					595306.44
1911	Mar 1	Thomas Edison Bonds	89	130931.67	1911	Mar 1	Balance		100931.67

Unexpired Insurance Premium

Jan 31	31	Accts Payable	149.2	930.19	July 31	31	General Expense	99.4	38.75	08
Jan 31	31		149.2	930.19	Aug 31	30		107.2	17.90	01
					Sep 31	30		106.1	27.90	01
					Oct 31	30		106.1	17.90	01
					Nov 30	30		109.7	17.90	01
					Dec 30	30		112.2	17.90	01
					Jan 31	31		115.7	80.00	07
					Feb 29	29		119.1	82.00	07
							Balance		51.78	12

967.13 14

May 31	31	Accts Payable	54.6	992.79	Nov 30	30	General Expense	176.1	8.58	41
Jan 31	31		89.1	992.79	Dec 30	30		178.1	8.58	41
Feb 28	28		10.1	115.67	Jan 31	31		131.1	8.58	41
					Feb 29	29		135.1	8.58	41
					Mar 31	31		138.1	8.58	41
					Apr 30	30		141.1	8.58	41
					May 31	31		144.1	8.58	41
					Jun 30	30		147.1	8.58	41
					Jul 31	31		150.1	8.58	41
					Aug 31	31		153.1	8.58	41
					Sep 30	30		156.1	8.58	41
					Oct 31	31		16.1	82.00	07
							Balance		12.20	12

1038.640

Mar 31	31	Balance	115.7	175.70	Mar 31	31	General Expense	175.1	8.68	53
Apr 30	30	Accts Payable	115.7	175.70	Apr 30	30		178.1	8.68	53
May 31	31		138.1	123.76	May 31	31		182.1	10.10	01
June 30	30			123.76	June 30	30		186.1	8.68	53
July 31	31			123.76	July 31	31		190.1	9.20	01
Aug 31	31			123.76	Aug 31	31		192.1	9.20	01
Sep 30	30			123.76	Sep 30	30		197.1	10.50	01
Oct 31	31			123.76	Oct 31	31		199.1	10.50	01
Nov 30	30			123.76	Nov 30	30		202.1	10.50	01
Dec 31	31			123.76	Dec 31	31		208.1	10.50	01
Jan 28	28			123.76	Jan 28	28		212.1	10.50	01
							Balance		118.30	12

1282.659

Mar 31	31	Balance	118.36	118.36
Apr 30	30	Reg of Unexpired Premium	28.25	28.25

Unexpired Insurance Premium

Mar 31	31	Forwarded	242	1010.13	Mar 31	31	General Expense	269.1	10.99	85
Apr 30	30	Reg of Unexpired Premium	269.1	1010.13	Apr 30	30		275.1	10.99	85
May 29	29		278.2	1010.13	May 29	29		280.1	10.99	85
June 28	28		294.1	1010.13	June 28	28		283.1	10.99	85
July 27	27		311.1	1010.13	July 27	27		287.1	10.99	85
Aug 26	26		325.1	1010.13	Aug 26	26		291.1	10.99	85
Sep 25	25		341.1	1010.13	Sep 25	25		295.1	10.99	85
Oct 24	24		355.1	1010.13	Oct 24	24		299.1	10.99	85
Nov 23	23		371.1	1010.13	Nov 23	23		303.1	10.99	85
Dec 22	22		385.1	1010.13	Dec 22	22		307.1	10.99	85
Jan 21	21		401.1	1010.13	Jan 21	21		311.1	10.99	85
Feb 20	20		415.1	1010.13	Feb 20	20		315.1	10.99	85
Mar 19	19		431.1	1010.13	Mar 19	19		319.1	10.99	85
Apr 18	18		445.1	1010.13	Apr 18	18		323.1	10.99	85
May 17	17		461.1	1010.13	May 17	17		327.1	10.99	85
June 16	16		475.1	1010.13	June 16	16		331.1	10.99	85
July 15	15		491.1	1010.13	July 15	15		335.1	10.99	85
Aug 14	14		505.1	1010.13	Aug 14	14		339.1	10.99	85
Sep 13	13		521.1	1010.13	Sep 13	13		343.1	10.99	85
Oct 12	12		535.1	1010.13	Oct 12	12		347.1	10.99	85
Nov 11	11		551.1	1010.13	Nov 11	11		351.1	10.99	85
Dec 10	10		565.1	1010.13	Dec 10	10		355.1	10.99	85
Jan 9	9		581.1	1010.13	Jan 9	9		359.1	10.99	85
Feb 8	8		595.1	1010.13	Feb 8	8		363.1	10.99	85
Mar 7	7		611.1	1010.13	Mar 7	7		367.1	10.99	85
							Balance		171.10	12

19760.22

1915					1915				
Mar	1	Balance		47.04	Mar	31	General Expense	212.	632.57
31		Reg. of ^{80%} Unexpired ^{Unexpired} Premium	447.	447.	30			217.	169.12
30		The annual Reg. 1915	452.	452.	31			223.	279.38
May	31		440.	440.	30			227.	77.34
June	30	The annual Reg. 1915	449.	449.	July	31	Reg. of Unexpired Premium	227.	22.22
				615.17					

Bates Mfg. Co.

[illegible]

Adjustment

1911	28 Profit - Loss	78	59,13 19	1910	31 General Expense	109	59,13 19
1911	31 Assets Receivable	106	149 1/2	1911	29 Assets Receivable	117	149 1/2

Insurance Reserve Fund

Mar 31	Forwarded	206	206	58	Mar 31	Forwarded	306	796	631
Apr 30	Deferred Charges	177	97	89	Apr 4	Cash	524	1707	
"	"	"	41	35	May 1	"	63	1867	
"	Accts Payable	175	87	27	June 5	Insurance	123	1990	
May 31	Deferred Charges	180	76	52	July 9	Cash	171	2161	
"	"	181	26	54	Aug 9	"	11	2172	
"	Accts Payable	138	27	77	Sept 9	"	100	2272	
June 30	"	146	27	12	Oct 8	"	110	2382	
"	Deferred Charges	186	27	29	Nov 12	"	12	2394	
July 31	Accts Payable	156	27	50	Dec 3	"	130	2524	
"	Deferred Charges	188	27	90	Jan 8	"	44	2568	
Aug 30	"	193	27	11	Feb 9	"	3	2571	
Sept "	"	195	76	17	Mar 78	"	10	2581	
"	Accts Payable	176	76	36					
Oct 1	"	191	80	00					
31	Deferred Charges	199	43	10					
"	Accts Payable	186	81	80					
Nov 29	Deferred Charges	202	87	80					
"	Accts Payable	197	13	90					
Dec 31	Deferred Charges	205	23	27					
"	"	"	7	25					
"	Accts Payable	207	74	72					
Jan 31	Deferred Charges	210	57	80					
"	Accts Payable	224	47	84					
Feb 28	Deferred Charges	214	34	00					
"	Accts Payable	222	11	33					
"	Balance		15	03					
			17	63				17	63

Mar 31	Deferred Charges	224	75	95	Mar 1	Balance	1503	71	
Apr 30	Reg of Dist	249	12	06	Apr 4	Cash	22	1525	
"	"	262	12	56	May 4	"	33	1558	
"	Deferred Charges	224	102	10	June 3	"	42	1600	
May 28	Reg of Dist	278	128	75	30	Accts Payable	235	1835	
"	Deferred Charges	230	101	05	July 16	Cash	51	1886	
June 30	Reg of Dist	291	104	50	Aug 17	"	65	1951	
"	Deferred Charges	225	127	73	Sept 15	"	74	2025	
July 31	"	226	138	20					
"	Reg of Dist	311	135	15					
Aug 31	Deferred Charges	242	32	24					
"	Reg of Dist	325	108	12					
Sept 30	Deferred Charges	241							

United State Government Income Tax

1915		1916		1917		1918		1919	
Mar	31	Accts. Payable	213.	170.99	June 6	Cash	434	1576	
					July 6	"	514	973	
					Aug. 29	"	594	2574	
					Sept. 29	"	77	8173	
					Oct. 1	"	91	1055	
					Nov. 5	"	101	1323	
					Dec. 9	"	111	524	
					Jan. 30	"	117	1011	
				170.99				170.99	

Bottom.

1915
May 31 Reg. of Dist. 110. 5240.00
1916
Feb 29 Profit & Loss 30. 5140.00
10280

Notes Payable

1915
Jan 11 Forward 26 5455335
12 191000 1916
13 234771 25
14 130779
15 140164
16 500000
17 500000
18 160776
19 160787
20 125000
21 144700
22 190164
23 261140
24 105411
25 225224
26 500000
27 237726
28 500000
29 110676
30 100000
31 107227
1916
Jan 10 100000
11 500000
12 212724
13 250000
14 160000
15 190000
16 160776
17 100000
18 230118
19 500000
20 500000
21 500000
22 1700000
23 1700000
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1917
Jan 11 Cash 26 500000
12 500000
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Notes Page

Feb 25	Paul	U. 16,000.00	Feb 29	Forward	781,754.13
		50,000.00			
		19,500.00			
		1,482.16			
21	For	15,000.00			
	for	15,000.00			
		781,754.13			781,754.13

Emerson photographed the
Cabinet Dept. Fin. Investments

[illegible]

Edison Phonograph Sales Abstract

Dec	31	Line Business	250	468 11 11	Dec	31	Line Business	250	468 11 11
		Manufacturing	17 33 17				Manufacturing	17 33 17	
		Cost	324	700 00			Cost	324	700 00
Jan		Cost	16	145 15			Cost	16	145 15
		Cost	206	98 14 97			Cost	206	98 14 97
		Cost & Mail	257	100 1 12 19			Cost & Mail	257	100 1 12 19
Jan	31	Albany, N.Y. S.D.	352	100 49	Jan	31	Albany, N.Y. S.D.	352	100 49
		Manufacturing	19 58 97				Manufacturing	19 58 97	
		Cost	26	13 8 14 49			Cost	26	13 8 14 49
Feb	29	Albany, N.Y. S.D.	361	100 49	Feb	29	Albany, N.Y. S.D.	361	100 49
		Manufacturing	364	1 50 5			Manufacturing	364	1 50 5
		Cost	31	2 16 6 72			Cost	31	2 16 6 72
				156 76 1 95					156 76 1 95

L. O. N. Rodriguez Accountly. Plm. - Total Investment

Debit		Credit		Balance	
1944	31 Machy & Sisco	31.00	2000.00	1969.00	
1945	29 Food + Fuel	371.00	55.19	1933.81	
	" Machy + Tools	"	388.79	1545.02	
	" Bus. Expenses	376.00	42.37	1502.65	
			125.56		1628.21

Lester E. Hovey

Construction & Maintenance Dept. Bureau of Commerce

Dec 31	Cash	161	18,600.00	Dec 31	General Exp.	444	1,799.25
	Manufacturing	366	1,000.00		Amort.	277	5,532.75
	Spec. General	374	1,000.00				
	Bank Exp.		1,000.00				
	Manufacturing		5,000.00				

Jan 31	Cash	20	2,752.75	Jan 31	Acc'ts. Receivable	850	1,920.
							12.00
Feb 29	General Expenses	261	445.00		Build. Construction	756	1,000.00
	Acc'ts. Receivable	355	1,567.07	Feb 29	Automobile	440	2,618.88
	Acc'ts. Payable	271	1,755.10		Buildings	361	5,000.00
	General Expenses		2,752.23		Est. Dept. Equip. & Sup.	242	2,100.00
	Acc'ts. Payable	358	251		Fuel Dept.	240	1,111.00
	Cash	30	4,505.18		Acc'ts. Payable	266	2,720.00
	Est. Dept. Equip. & Sup.	271	1,667.00				2,172.93
	Amort.		1,353.50		Manufact. Constr.		2,000.00
	Buildings	310	2,544.92		Acc'ts. Payable		2,150.00

	Amort.	367	4,470.00
	Manufact. Constr.		5,000.00
	Est. Dept. Equip. & Sup.	267	4,000.00
	Cash	104	1,100.00
	Est. Dept. Equip. & Sup.		1,100.00
		374	1,175.
	Acc'ts. Payable	279	25.
	Est. Dept. Equip. & Sup.		4,000.00
	Amort.		1,000.00

11,497.66

Green River Forks

County of Hamilton, N.Y. Sig: Fred. Schuchman

Dec	31	General	36.	1755.05	Feb	29	Horizontal line	74.	577.05
			Aug.	1755.05			Horizontal line	76.	577.05
Jan	31	General	36.	1755.05					577.05
Feb	29	Horizontal line	76.	577.05					577.05
			Aug.	1755.05					577.05
		Ordnance	27.	271					577.05
				70.552.25					70.552.25

L. O. H. Osno Assembly Left - Current Advances.

¹⁹¹⁵		¹⁹¹⁵	
Dec 31	Manufacturing 251,129.17	Dec 31	Manufacturing 251,129.17
	General Expense 277		General Expense 277
¹⁹¹⁶		¹⁹¹⁶	
Jan 31	General Expense 352	Jan 31	General Expense 352
	Manufacturing 12,912.17		Subsistence Adv. 256
	Cash 261,839.84	29	Account Payable 361,551.82
Feb 29	Manufacturing 261,151,612.8		Manufacturing 270
	Engineering Co. 1,622.77		Subsistence Adv. 31,551.82
	General Expense 1,250.00		Subsistence Adv. 1,950.00
	Subsistence Adv. 599.62		Subsistence Adv. 9,500.00
	Subsistence Adv. 15,771.95		Subsistence Adv. 15,771.95
	Subsistence Adv. 261,151.03		Subsistence Adv. 15,771.95
	Cash 324,151.03		Subsistence Adv. 15,771.95
	General Expense 377,739.97		Subsistence Adv. 15,771.95
	Subsistence Adv. 271,800.00		Subsistence Adv. 15,771.95
	72,975.66		72,975.66

L.P.H. Home Account, Sept. Lined Government

Dec. 31	Machly Co. Leds	500.	22,543	Dec. 31	Machly Co. Leds	500.	22,543
1914.				1914.			
Jan. 31	Machly Co. Leds	500.	22,543	Jan. 31	Machly Co. Leds	500.	22,543
Feb. 1	William Leds	500.	22,543	Feb. 1	William Leds	500.	22,543
			552,347				552,347

EO. H. Pearl Sept. Fixed Amusement

Dec. 31	Money on hand	250.	22 16 79 1/2	Dec. 31	Balance on hand	25 16 79 1/2
		201	14 88 8 62			
Jan. 1	Balance forward	209.	14 88 8 62			
July 29		327	43 82			
			23 16 79 1/2			25 16 79 1/2

E. O. Wks. Bates Hand. Mach. Sept.

*1916
Jan. 31*

E. O. W. Bates Jumb. Mach. Dept. Fixed Investments.

1916
Jan 31 Machy. + Stck. 353. 966.502 36 275 240000.00 240000.00 1916 1917

Edison Phonograph General Mfg. Dept. Current Accounts

Jan 31	Cash	24	1911/12 Jan 31	General Expense	209	373.13
	Manufacturing	258	Feb 28	General Expense	177	499
Feb 29	Office Exp. Current	711		" "	579	1144
	Office Exp. Current	121		General Exp. Current	121	1260
	Office	227				
	Manufacturing	248				
	Office Expense	369				
	Manufacturing	32				
	Cash	54,114.99				
	General Expense	776				
		3,154,121				3,154,121

**Edison Phonograph Works Records
Journal #4 (1901-1908)**

This journal covers the period February 1901-February 1908. Chronological entries provide information about transactions posted to various accounts and recorded in the general ledgers. The spine is stamped "Journal No. 4, E.P.W." and is labeled "Feby 1st 1901 to Feby 29th 1908." The book contains 401 numbered pages; some pages are blank. Entries on pages 148-208 are written in faint green ink and may be difficult to read.

[REDUCTION RATIO = 16:1]

Journal

No 4

E. P. W.

Orange N.J. February, 1901

1

8-400

To Individuals & Co.			
Transferring amounts, amount of			
Paid Jan 21, 1901, to 1900			
1/2 Bates & Co. Rec	250		
2000 Sumner Bros	250		
1/2 Bates & Co. Rec	250		
3000 Sumner Bros	250		
To Individuals & Co.			
Transferring from Bates & Co. Rec			
amount equal to dividends received			
on acct. of Receivables of London			
Printing & Publishing Co.			
1/2 Bates & Co. Rec	4.00		
2000 London City & Dist. Co.	4.00		
1/2 Bates & Co. Rec	4.00		
3 Bates & Co. Rec	4.00		
To Individuals & Co.			
Transferring amounts			
1/2 Bates & Co. Rec	4.00		
2000 London City & Dist. Co.	4.00		
1/2 Bates & Co. Rec	4.00		
2000 London City & Dist. Co.	4.00		
To Individuals & Co.			
Transferring amounts			
1/2 Bates & Co. Rec	275		
2000 Sumner Bros	275		
1/2 Bates & Co. Rec	275		
2000 Edison Sewing Mach. Co.	275		

Orange N. J. February 1901

16	Dividend	722.160	
16	To Individuals & Co	722.160	
	For a dividend of 1 st per share on all stock of the Company submitted to the Board of Directors at a Special Meeting held at Newark N. J. on Monday May 7, 1901. Dividend to		
16	The A. C. Brown	209.21	3102.01
100	Geo. H. Randolph	10.11	15.00
100	Mrs. M. R. Gibson	30.11	45.00
100	W. E. Johnson	5.11	7.50
1	Sam. L. Smith	5.11	7.50
100	Chas. Batchelor	24.41	37.00
100	H. B. Archibald	25.11	37.00
100	Arthur. Longphorne	14.00	21.00
100	Geo. E. Linder	5.11	7.50
100	J. S. M. Cherry	5.11	7.50
100	Geo. D. H. Luntz	23.75	35.00
100	Walter Luntz	31.00	45.00
1	Notes Receivable	400.00	
16	To Individuals & Co	400.00	
	Notes made dated Feb. 19, 1901 payable at Newark National Bank N. J.		
100	National Bank	400.00	

Orange N. J. Feb. 19, 1901

55	Notes Receivable	19	
16	To Individuals & Co	19	
	Notes made dated Feb. 19, 1901 payable at Newark National Bank Newark N. J.		
100	National Bank	400.00	
16	Individuals & Co	19	
16	To Individuals & Co	19	
	Transferring amounts		
1	Madison & Co	107.25	
16	National Bank to	107.25	
16	Individuals & Co	20	
16	To Individuals & Co	20	
	Transferring balance from Jan. 30, 1901 from St. Louis Ledger to A. Bates Accts		
6	Reed & Co	3.50	
16	Shewart & Co	3.50	
16	Bates Accts Rec	3.50	
16	Stewart & Co	3.50	
16	Individuals & Co	20	
16	To Individuals & Co	20	
	Transferring from St. Louis Ledger to Bates Accts Rec Ledger amount of Ledger		
16	Lincoln Street	2.00	
16	Bates Accts Rec	2.00	
16	Lincoln Street	2.00	
16	Individuals & Co	20	
16	To Individuals & Co	20	
	Transferring amount of Transfer to 1901 from St. Louis Ledger to Bates Accts Rec Ledger		
16	W. A. Foster & Co	12.50	
16	Bates Accts Rec	12.50	
16	W. A. Foster & Co	12.50	

Orange N. J. February 1901.

167	Individuals to Co.	
168	To Individuals to Co.	
	Transferring balance Sept 11, 1901 from St. Louis ledger to Baker Aerts Bank Ledger	
169	Baker Aerts Bank	1500
170	Baker Aerts Bank	1500
171	Baker Aerts Bank	1500
172	To Individuals to Co.	
173	General Expenses	
174	Salary for February 1901	
175	Thos. A. Ellison	1000.00
176	To Individuals to Co.	
177	To Individuals to Co.	
	Transferring balance Sept 11, 1901 of Stanley & Pattersons Account to the amount of \$149.40 as per understanding Stanley & Patterson	149.40
178	Edison Mfg Co	149.40
179	To Individuals to Co.	
180	To Baker Aerts Bank	
	Amount of \$100.00 as per draft on drawing it payable at Commercial Bank of New York N.Y. being settlement of salary balance to March 1, 1901.	
181	Thos. A. Ellison	500.00
182	To Individuals to Co.	
183	To Individuals to Co.	
	Transferring amount of \$100.00 from St. Louis ledger to Baker Aerts Bank ledger	
184	J. W. Barker & Co	100.00
185	Baker Aerts Bank	100.00
186	J. W. Barker & Co	100.00

Orange N. J. February 1901.

167	Individuals to Co.	
168	To General Expenses	
	Amount of Baker Aerts Bank account debit in settlement of accounts during February 1901 as recorded in Cash Book folios 186 to 188 both sides.	
169	General Expenses	
170	To Individuals to Co.	
	Amount of Baker Aerts Bank account during February 1901, allowed in settlement of accounts as recorded in Cash Book folios 186 to 188 both sides.	
171	Baker Aerts Bank	599.70
172	General Expenses	
173	To Individuals to Co.	
	Transferring from Baker Aerts Bank ledger an amount charged to Baker Extra Expenses during the month of February 1901.	
174	Baker Extra Expenses	100.00
175	Baker Extra Expenses	100.00
176	Baker Aerts Bank	999.70
177	Baker Extra Expenses	99.70
178	To Individuals to Co.	
179	To Individuals to Co.	
	Transferring item of Betty Aerts payment to Western Union Tel Co from St. Louis ledger to Baker Aerts Bank ledger	
180	Baker Aerts Bank	7.00
181	Western Union Tel Co	7.00
182	Western Union Tel Co	7.00

Orange N.J. February 1901

Sales

To Individuals & Co

To write on account of Sales during the month of February 1901 on Bates & Co's on Merchandise and Bates Merchandise

Bates Auto Res. 110.00
Bates Merchandise 110.00

Bates Merchandise 110.00
J. W. H. H. H. 110.00

J. W. H. H. H. 110.00
J. W. H. H. H. 110.00

J. W. H. H. H. 110.00
J. W. H. H. H. 110.00

J. W. H. H. H. 110.00
J. W. H. H. H. 110.00

J. W. H. H. H. 110.00
J. W. H. H. H. 110.00

J. W. H. H. H. 110.00
J. W. H. H. H. 110.00

J. W. H. H. H. 110.00
J. W. H. H. H. 110.00

J. W. H. H. H. 110.00
J. W. H. H. H. 110.00

J. W. H. H. H. 110.00
J. W. H. H. H. 110.00

J. W. H. H. H. 110.00
J. W. H. H. H. 110.00

J. W. H. H. H. 110.00
J. W. H. H. H. 110.00

J. W. H. H. H. 110.00
J. W. H. H. H. 110.00

J. W. H. H. H. 110.00
J. W. H. H. H. 110.00

J. W. H. H. H. 110.00
J. W. H. H. H. 110.00

J. W. H. H. H. 110.00
J. W. H. H. H. 110.00

J. W. H. H. H. 110.00
J. W. H. H. H. 110.00

J. W. H. H. H. 110.00
J. W. H. H. H. 110.00

J. W. H. H. H. 110.00
J. W. H. H. H. 110.00

J. W. H. H. H. 110.00
J. W. H. H. H. 110.00

Orange N.J. February 1901

To Individuals & Co

To Individuals & Co

To write off sundry debts & credit balances appearing on the following accounts in the Bates Auto Res Ledger Feb. 1901 - in satisfaction of all bills more than long attached

Bates Auto Res 700
Bates Suspense 700

Bates Auto Res 700
Bates Suspense 700

Bates Auto Res 700
Bates Suspense 700

Bates Auto Res 700
Bates Suspense 700

Bates Auto Res 700
Bates Suspense 700

Bates Auto Res 700
Bates Suspense 700

Bates Auto Res 700
Bates Suspense 700

Bates Auto Res 700
Bates Suspense 700

Bates Auto Res 700
Bates Suspense 700

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Bates Auto Res 700
Bates Suspense 700

Bates Auto Res 700
Bates Suspense 700

Bates Auto Res 700
Bates Suspense 700

Bates Auto Res 700
Bates Suspense 700

Orange N.Y. February 28, 1901

Profit Loss
To Suspense
Transferring balance appearing
on Suspense Acct to Profit Loss
Acct.

Machinery Tools
To Manufacturing
To correct error in distribution of
Shop Order No. 39, distribution being
this balance should have been
Manufacturing Tools
This balance

Manufacturing
To Individuals & Co.
Error entering amount of bill
19297 in Abstract of Sales
Entered as 14.29
Should be 14.29

Photograph
National Photo Co.

Individuals & Co.
To Individuals & Co.
Transfer of acct
of National
National Photo Co.

Bond Interest
To unpaid Bond Interest
Amount due on Coupon Series
No. 7 but unclaimed and unpaid
Feb. 28, 1901, and not put to demand
Amount Series 7500.00
Paid 6750.00

3525

3525

72796

72796

0.2

0.2

2250

2250

9250.0

9250.0

Orange N.Y. February 28, 1901

Individuals
To Individuals & Co.
Amount of disbursements during the
month of February, 1901 as recorded in
Register of disbursements plus 211.4
211.4 both in

General Expense
Machinery Tools
Manufacturing Tools
Manufacturing
Sales
Individuals & Co.

Individuals
To Manufacturing
Amount of Material, Expense
and Rent Factory transferred during
February, 1901 as recorded in
Register of disbursements plus
211.4 p. 211.4

General Expense
Machinery Tools
Manufacturing
Manufacturing
To Manufacturing
To correct error in distribution of
voucher 12932 distributed to Special
Shop Order, should have been to
Manufacturing

Manufacturing
To Manufacturing
To transfer from Special Shop Order
Acct amount of National Photo Co.
Sales, and amount of Labor to
Manufacturing

Manufacturing
To Manufacturing
To transfer from Special Shop Order
Acct amount of National Photo Co.
Sales, and amount of Labor to
Manufacturing
Material Sales
This balance
Special Shop Order

3794.97

10603.95

600.59

100.00

70662.67

27.57

3060

90456

14700

7191

752038

114

114

99605

99605

149.54

201.01

99605

Orange N. J. February 1901

18	Individuals To	58528.11	
	To sundries		
	Amount of Sales during the month		
	of February 1901 as recorded in		
	Abstract of Sales for Feb 1901		
	At L. Wash		
19	General Expense	5317.05	
20	Machinery & Tools	775.00	
10	Sales	47075.86	
17	Manufacturing	4020	
	To		
22	Allowance for Depreciation	33702.66	
	To General Expense	33702.66	
70	To transfer the following items from		
	General Expense as Allowance for		
	Depreciation should over these items		
	Improvements Plant Repairs 677.50		
	Maintenance of Tools 27100.31		
	To		
8	Profit & Loss	23197.4	
	To General Expense	23197.4	
71	To write of legal Expense amounting		
	to \$13.22 and 1/2 per interest Expense		
	2206.22		
	To		
17	Manufacturing	9094.30	
	To General Expense	9094.30	
72	To transfer Expense directly charge		
	able to Sales sundries		
27	Sales Credits & L. Wash	9094.30	
	To		
17	Manufacturing	10000.47	
	To General Expense	10000.47	
73	To transfer amount standing to		
	credit of Box Factory Acct to credit		
	of General Expense (By B. B. out dis)		
	Box Factory 2535.47		

Orange N. J. February 1901

18	Sales	58528.11	
	To Sales		
18	To transfer balance standing to		
	credit of Savings to credit of Plum		
	graph Acct		
10	Savings	58528.11	
2	Photograph	5600.1	
	To		
17	Sundries		
	To Manufacturing		
	To correct errors in distribution		
	of vouchers during the period Jan		
	uary Feb. 20, 1901, and transfer		
	amounts for the same period		
	As per attached paper		
19	General Expense	1055.26	
20	Machinery & Tools	12.51	
17	Manufacturing	3177.31	
5	Photograph	2000.50	
12	Manufacturing	7.40	
10	Box	29.04	
10	Cabinet	155.07	
12	Raw Material	2020.50	
	To		
17	Manufacturing	2071.65	
19	To Manufacturing	2071.65	
	To distribute pro rata difference		
	existing in Material Acct		
5	Photograph	1049.17	
27	Balance Acct. L. Wash	126.60	
10	Wax	672.63	
10	Cellulose waxes	77.10	
10	Spring Motor	77.95	
12	Box Factory	308.8	
10	Box Motor	270.1	
	To		
10	Material	2071.65	

Orange N.J. February 1901

16	Manufacturing	28	
17	To Manufacturing		
	To distribute pro rata balance		
	existing in Manufacturing Acct		
18	Manufacturing	5774.46	
19	Photograph	2122.56	5774.46
20	Miscellaneous	176.65	300.00
21	Spring Motor	246.66	246.66
22	Tan Motor	42.04	104.52
23	Proj Sinter	509.15	129.62

16	Individuals & Co	28	
17	To Sales		
	To charge National Photograph Co with		
	an amount to cover additional profit		
	to which we are entitled on Photograph		
	and Wax accounts as indicated below		
18	National Photograph Co	29,664.04	
19	Photograph	44,149.24	
20	Wax	16,215.20	

18	Photograph	44,149.24	
19	Wax	16,215.20	
20	Spring Motor	246.66	
21	Tan Motor	42.04	
22	Proj Sinter	509.15	
23	Cabinet	721.84	

17	Manufacturing	28	
18	To General Expense		
	To distribute pro rata General Expense & Appreciation		
	on following accounts:		
19	Photograph	57,733.38	
20	Patent Lito & L.D. Machine	5,403.15	
21	Wax	44,634.44	
22	Miscellaneous	572.97	
23	Spring Motor	504.87	
24	Tan Motor	1782.16	
25	Proj Sinter	2175.62	
26	Cabinet	721.84	

Orange N.J. February 1901

73	General Expense	28	
64	To Allowance for Depreciation		
	5% of Labor & Material during fiscal year		
	ending July 28, 1901		
	5% of 592,074.16		
	28		

152	Sales	28	
176	To Manufacturing		
	To transfer cost of Sales of the following		
	accounts for fiscal year ending July 28, 1901		
2	Photograph	290,990.21	
13	Patent Lito & L.D. Machine	39,039.21	
65	Merchandise	1,442.16	
7	Wax	1,417,442.01	
26	Miscellaneous	17,546.57	
43	Spring Motor	17,893.41	
185	Tan Motor	2,621.24	
37	Proj Sinter	7,227.05	
55	Prod Material Sales	1,392.48	
69	Cabinet	17,061.07	
5	Photograph	290,990.21	
27	Patent Lito & L.D. Machine	39,039.21	
116	Merchandise	1,442.16	
143	Wax	1,417,442.01	
175	Miscellaneous	17,546.57	
180	Spring Motor	17,893.41	
186	Tan Motor	2,621.24	
127	Proj Sinter	7,227.05	
184	Prod Material Sales	1,392.48	
135	Cabinet	17,061.07	

8	Profit & Loss	28	
	To Surplus		
	To write off the following accounts		
128	Prod Interest	1500.00	
163	Dividend	28,566.40	

Orange N.J. February 1901

Sales	To Profit and Loss
The profits realized on the following accounts during fiscal year ending Feb'y 28-1901:	
2 Phonographs	43,661.55
13 Sales Lists & L.O. Machines	11,533.12
65 Paper Merchandise	923.10
7 Wax	21,261.31
26 Miscellaneous	1,250.25
43 Spring Motors	898.62
125 Pen Blades	547.80
37 Projecting Linoleum	1500.63
55 Raw Material Sales	745.97
69 Cash	9462.12

66263.17

66263.17

Orange NJ March 1901

162	Individuals ^{to} Co	20000.00	
151	To Notes Payable		20000.00
	Given David Insull, our bondsmen dated this date bearing interest @ 5% per annum and payable at German National Bank Newark NJ.		
1	Samuel Insull	20000.00	
162	Individuals ^{to} Co	30	
162	To Individuals ^{to} Co		30
	Transferring from P. Co Ledger into Bates Accts Receivable Ledger. Stewart ^{to} Co Int 7/19/01		
6	Stewart ^{to} Co	30	
4/3	Bates Accts Rec	30	
2/3	Stewart ^{to} Co	30	
162	Individuals ^{to} Co	159	
162	To Individuals ^{to} Co		159
	To credit in the Bates Accts Rec Ledger to Stewart ^{to} Co amount of their invoice No. against National Phonos Co		
747	National Phonos Co	159	
4/3	Bates Accts Rec	159	
7/3	Stewart ^{to} Co	159	
121	Notes Payable	35000.00	
162	To Individuals ^{to} Co		35000.00
	Received from T.A. Edison, which was this day cancelled, our acceptance dated July 28 at 30 days, payable at German National Bank Newark NJ.		
1/5	Thos A Edison	35000.00	
162	Individuals ^{to} Co	35000.00	
121	To Notes Payable		35000.00
	Accepted this day draft at one month making it payable at German National Bank Newark NJ. Bal of salary 7c to Apr.		
1/6	Thos A Edison	35000.00	

Orange NJ March 1901

73	General Expense	3.00	
162	To Individuals ^{to} Co		41.99
	Amount of Bates Interest & Discount allowed in settlement of accounts during month of March 1901 as recorded in Cash Book 14 folios 142 to 147 both incl		
4/3	Bates Accts Rec	41.99	
162	Individuals ^{to} Co	30	
162	To Individuals ^{to} Co		150.00
	Transferring amount of balance from P. Co Ledger to Bates Accts Rec Ledger		
103	Bookkeeper Publishing Co Ltd	150.00	
4/3	Bates Accts Rec	150.00	
5	Bookkeeper Publg Co Ltd	150.00	
73	General Expense	3.00	
162	To Individuals ^{to} Co		1000.00
	Salary for month of March 1901		
1/5	Thos A Edison	1000.00	
162	Individuals ^{to} Co	6.50	
	To General Expense		6.50
	Amount of Interest & Discount deducted in settlement of accounts during month of March 1901 as recorded in Cash Book folios 142 to 147 both inclusive		
73	General Expense	3.00	
162	To Individuals ^{to} Co		100.00
	Amount of Bates Extra Expense for month of March 1901		
4/3	Bates Accts Rec	100.00	
4/2	Bates Extra Expense	100.00	
162	Individuals ^{to} Co	6.00	
162	To Individuals ^{to} Co		6.00
	Transfers cancelled in posting bill 2964 7/19/01		
4/3	Bates Accts Rec	6.00	
3	Shea Smith & Co	6.00	
4/3	Bates Accts Rec	6.00	
4	During March Sep Co 6.00		

Orange, N.J. March 1901

30			
Sundries			
162	To Individuals & Co.	23662.71	
Amount of Disbursements for month of March 1901 as recorded in Register of Disbursements folios 219 to 236 both inclusive			
73	General Expense	11213.63	
24	Machinery & Tools	5144.57	
51	Turniture & Fixtures	500.00	
76	Manufacturing	21521.57	
153	Sales	70	
162	Individuals & Co.	1215	
30			
Sundries			
76	To Manufacturing	2460.29	
Amount of Material Transferred to Factory & Wagoning during month of March 1901 as recorded in Register of Disbursements folios 223 & 224			
73	General Expense	1661.30	
24	Machinery & Tools	7410	
76	Manufacturing	3724.19	
30			
162	Individuals & Co.	43679.40	
30			
Sundries			
Amount of Sales during month of March 1901 as recorded in Abstract Sales folios 139 to 163 both inclusive			
73	General Expense	263.67	
153	Sales	43416.21	
30			
153	Sales	10312	
162	To Individuals & Co.	10312	
Commission on amount of Sales of Bates Edison Machines during month of March 1901 also Bates Merchandise for same period			
14	Auto Numbering Machs.	4979.41	21
66	Bates Merchandise	17654	303
101	J. K. Shelton	5155.94	103.12

Orange, N.J. April 1901

4			
163 Individuals & Co.		24100	
163 To Individuals & Co.		24100	
Transferring from Individuals & Companies Ledger to Bates Accts Rec Ledger amount of Services Dec 7-1900 - 9.20 May 11-1901 15.00			
5	Walter Numbering Machine Co.	24100	
46	Bates Accts Rec	24100	
7	Walter Numbering Mach Co.	24100	
10			
163 Individuals & Co.		216	
163 To Individuals & Co.		216	
Transferring from S. C. S. Ledger into Bates Accts Rec Ledger amount of Services Mar 19 1901 Mar 23 1901 Mar 26 1901			
6	Stewart & Co	216	
44	Bates Accts Rec	216	
74	Stewart & Co	216	
12			
163 Individuals & Co.		4446	
163 To Individuals & Co.		4446	
Transfer to balance acct of J. J. Monck			
219	Edison Mfg Co	4446	
44	Bates Accts Rec	4446	
191	J. J. Monck	4446	
17			
163 Individuals & Co.		3357.16	
17 To Notes Payable		3357.16	
Accepted 30 days draft of Amer Cit & Supp Co dated this day and made same payable at German National Bank Newark N.J.			
5	American Cit. & Supply Co.	3357.16	
17			
163 Individuals & Co.		570.13	
17 To Notes Payable		570.13	
Accepted this day draft of Chas M. Heid & Co. dated June 26-1901 at German National Bank Newark N.J.			
3	Chas M. Heid	570.13	

Orange N.J. April 1901.

167	Individuals' % Co	19	
167	To Individuals' % Co		
167	Transferring from Dr Co Ledger into Bates Accts Rec		
167	Dr Co Ledger amount of April 1901		
167	N.A. Force & Co	35.00	
167	Bates Accts Rec	35.00	
167	N.A. Force & Co	35.00	
167	Individuals' % Co	30	
167	To Individuals' % Co		
167	Transferring amount of April Vouchers from Dr Co Ledger into Bates Accts Rec		
167	Dr Co Ledger		
167	Boag & Keiser Publishing Co	35.00	
167	Bates Accts Rec	35.00	
167	Boag & Keiser Publishing Co	35.00	
167	General Expense	30	
167	To Individuals' % Co		
167	Transferring from Bates Accts Rec Ledger amount of Bates Extra Expenses for the month of April 1901 into		
167	General Ledger acct		
167	Bates Accts Rec	100.00	
167	Bates Extra Expenses	100.00	
167	General Expense	30	
167	To Individuals' % Co		
167	Salary for month of April 1901		
167	J. Q. Gibson	1000.00	
167	Individuals' % Co	30	
167	To Individuals' % Co		
167	To take out of Profit % Co amount of Dr J. Q. Johnson & Co charged to Suspense		
167	Bates Accts Rec	.05	
167	J. Q. Johnson & Co	.05	
167	Bates Accts Rec	.05	
167	Bates Suspense	.05	

35.00

350.00

1000.00

1000.00

0.5

Orange N.J. April 1901.

73	General Expense	30	
167	To Individuals' % Co		
167	Amount of Bates Interest % Discount allowed in settlement of accounts for month of April 1901 as recorded in Cash Book & folios 1 to 5 inclusive		
167	Dr Discount	57.15	
167	Bates Accts Rec	57.15	
73	General Expense	30	
167	To Individuals' % Co		
167	Amount of Cash Discount deducted in settlement of accounts during month of April 1901 as recorded in Cash Book & folios 1 to 5 both inclusive		
167	Individuals' % Co	30	
167	To Sundries		
167	Amount of Sales for month of April 1901 as recorded in Abstract of Sales folios 1 to 4 to 1 to 1 to 1 both inclusive to be credited as follows		
167	General Expense		
167	Sales		
167	Manufacturing	30	
167	Individuals' % Co		
167	To Individuals' % Co		
167	Transfer to correct error in posting bill		
167	312.07 Apr 22-1901		
167	Bates Accts Rec	60.00	
167	W. H. Barnard Wilmington N.C.	60.00	
167	Bates Accts Rec	60.00	
167	W. H. Barnard Hartford Ct	60.00	

57.15

506.

39,170.35

1964.3

39271.11

600.

600.

Orange, N.J. April 1911

153	Sales	36		118.43	
163	To Individuals & Cos			118.43	
	2 1/2% Commission on amount of Sales of Bates & Edison Numbering Machines and Bates Merchandise during month of April 1911 as recorded in Abstract Sales				
14	Bates Auto & LEO Machine	5871.37	2 1/2%	118.43	
166	Bates Merchandise	250.22	2 1/2%	5.00	
101	J. W. Gladstone			118.43	
163	Individuals & Cos	30		0.30	
163	To Individuals & Cos			0.30	
	Transferring from J. W. Gladstone into Bates Accts. Rec. Ledger the following invoices from J. S. Auch 7/26. 5.00 7/4. 12 3/4. 3.00				
102	J. S. Auch	5.00			
7/4	Bates Accts. Rec.	5.00			
1	J. S. Auch	5.00			
163	Individuals & Cos	30		16.00	
163	To Individuals & Cos			16.00	
	Transferring from Bates Accts. Rec. Ledger into J. W. Gladstone the above amount debit the Mobile Co. of America as we have placed the account in the hands of the Associated Merchants of N.J. for collection				
201	Associated Merchants of N.J.	16.00			
7/4	Bates Accts. Rec.	16.00			
209	Mobile Co. of America	16.00			
		30			

Sundries

76	To Manufacturing			114.37 1/2	
	Amount of Material Transfer during month of April 1911 as recorded in Register of Disbursements folio 231. Chargeable to				
73	General Expense			20.96 95	
24	Machinery & Tools			17.42	
176	Manufacturing			9822.81	

Orange, N.J. April 1911

	Sundries	20			
163	To Individuals & Cos			5386.02	
	Amount of Invoices rendered during month of April 1911 as recorded in Register of Disbursements folios 225 to 231. Both inclusive Chargeable to				
73	General Expense			1445.16	
24	Machinery & Tools			654.96	
176	Manufacturing			3137.75	
163	Individuals & Companies			240.	
				47.15	
163	Individuals & Cos	30		506.	
73	To General Expense			506.	
	To cancel Journal entry of this date see folio 21 same being in error				
163	Individuals & Cos	30		506.	
73	To General Expense			506.	
	Amount of Cash Disbursements deducted in settlement of account during month of April 1911 as recorded in Cash Book 25 folios 16 to 5 Both inclusive				

Orange N.J. May 1901

163	Individuals & Co.	13	
163	To Individuals & Co.		
	Transferring Cash received from Neil Ranch Apr 26-1901 to account of Schaff & O'Connor as they deduct this amount in settlement made this day		
14	Bates Acct Rec	6.75	
21	Neil Ranch	6.75	
14	Bates Acct Rec	6.75	
6	Schaff & O'Connor Co	6.75	
73	General Expenses	31	
163	To Individuals & Co.		
	Amount of Bates Extra Expense for month of May 1901		
14	Bates Acct Rec	125.00	
73	Bates Extra Expense	125.00	
163	Individuals & Co.	31	
163	To Individuals & Co.		
	Transferring from Dr Co Ledger into Bates Acct Rec Ledger amount of Invoice Apr 26-1901		
100	New A. Force & Co	18.00	
14	Bates Acct Rec	18.00	
1	New A. Force & Co	18.00	
163	Individuals & Co.	31	
163	To Individuals & Co.		
	Transferring from Bates Acct Rec Ledger into Dr Co Ledger the amount of N.B. Bennett Co account placed in hands of attorney for collection		
202	Associated Merchants of N.Y.	100.00	
14	Bates Acct Rec	100.00	
210	N.B. Bennett Co	100.00	

675

125.00

150.00

100.00

1000

Orange N.J. May 1901

163	Individuals & Co.	31	
163	To Individuals & Co.		
	Transferring from Bates Acct Rec Ledger into Dr Co Ledger amount of Cash received in settlement of Accounts of Mobil Co of America & N.B. Bennett Co		
14	Bates Acct Rec	23.50	
210	Associated Merchants of N.Y.	23.50	
302	Associated Merchants of N.Y.	23.50	
163	Individuals & Co.	31	
163	To Individuals & Co.		
	Transfer to correct error in posting bill 207.00 March 25-1901		
14	Bates Acct Rec	.64	
209	Abt & May	.64	
14	Bates Acct Rec	.64	
209	American Ice Co	.64	
163	Individuals & Co.	31	
163	To Notes Payable		
	Gave this day our Note payable amount after date of German National Bank Newark bearing interest @ 6%		
1	Samuel Israel	3000.00	
163	Individuals & Co.	31	
163	To Notes Payable		
	Gave our Note dated this day payable (4) four months after date @ German National Bank Newark 719 Interest added @ 6%		
71	Bridgeport Brass Co	1224.00	
163	Individuals & Co.	31	
163	To Notes Payable		
	Gave our Note dated this day payable (4) four months after date @ German Nat Bank Newark 719 Interest added @ 6% in settlement of Apr in full to April 1901		
71	Bridgeport Brass Co	1128.06	

23.55

23.50

64

64

3000.00

3000.00

1224.00

1224.00

1128.06

1128.06

Orange, N.J. May 1901

163	Individuals & Cos.	3033.57	
175	To Notes Payable	3033.57	
	Pass our Note dated this day payable (4) four months after date, at German National Bank Newark N.J. Interest added @ 6% In settlement of account on full to May 1-1901		
202	Columbia Steam Boiler Co.	3033.57	
163	Individuals & Cos.	28.75	
163	To Individuals & Cos.	28.75	
	Transferring the amount of Cash received Apr 32-1901 from Fidelity & Casualty Co to account of Sam Reed		
201	Fidelity & Casualty Co.	28.75	
201	Sam Reed	28.75	
73	General Expense	1000.00	
163	To Individuals & Cos.	1000.00	
16	Salary for month of May 1901	1000.00	
16	Phos A Edison	1000.00	
163	Individuals & Cos.	65726.24	
	To Sundries		
	Amount of Sales for month of May 1901 as recorded in Abstract of Sales folios 119 to 153 both inclusive to be credited to		
73	General Expense	220.11	
173	Sales	65800.19	
76	Manufacturing	25	
173	Sales	12533	
163	To Individuals & Cos.	12533	
	2 1/2 Commission on amount of Sales of Auto & Pump Mchs & Pate Mchs during month of May 1901 as recorded in Abstract of Sales		
66	Pate Mchrs	48714.07	8.75
14	Auto & Pump Machinery	58254.2	116.57
101	J. H. Gladstone	12533	

Orange, N.J. May 1901

73	General Expense	53.57	
163	To Individuals & Cos.	53.57	
	Amount of Pate Interest & Discount allowed in settlement of account during the month of May 1901 as recorded in Cash Book 5 folios 6 to 11 inclusive		
44	Pate debt Rec	53.57	
163	Individuals & Cos.	242	
73	To General Expense	242	
	Amount of Cash which deducted in settlement of accounts during month of May 1901 as recorded in Cash Book 5 folios 6 to 11 both inclusive		
	Sundries		
163	To Individuals & Cos.	65501.32	
	Amount of Invoices vouchers during month of May 1901 as recorded in Register of Disbursements folios 232 to 239 both inclusive chargeable to		
73	General Expense	9805.49	
24	Machinery & Tools	4534.27	
51	Guarantee & Franchise	11.03	
76	Manufacturing	49189.47	
173	Sales	671	
163	Individuals & Companies	33.88	
	Sundries		
76	To Manufacturing	12500.34	
	Amount of Material Transferred for month of May 1901 as recorded in Register of Disbursements folio 239 chargeable to		
73	General Expense	2588.75	
24	Machinery & Tools	2991	
76	Manufacturing	10266.61	

Orange N.J. June 1901

163	Individuals & Co.	1.0	
163	To Individuals & Co.		
Received this day accepted Draft payable at three days sight at Merchants National Bank New Haven Conn in settlement of account in full to Apr 20 1901 Interest added			
161	Bates Accts Rec	13.56	
44	Bates Accts Rec	13.56	
100	Valentine Stamp Co	13.56	
163	Individuals & Co.	1.0	
74	To General Expense		
Interest added to Accepted Draft of even date payable 30 days sight			
44	Bates Accts Rec	2.0	
100	Valentine Stamp Co	2.0	
58	Notes Receivable	1.0	
163	To Individuals & Co.		
Received this day 2 month note payable to Berman National Bank Newark N.J			
70	National Phone Co	500.00	
163	Individuals & Co.	1.0	
163	To Individuals & Co.		
Transferring Credit Bill 50.90 1901 to account of NYC NRRRC the same being applied in settlement of account this day			
44	Bates Accts Rec	2.00	
201	A C Lindsay	2.00	
44	Bates Accts Rec	2.00	
3	NYC & NRRRC	2.00	
58	Notes Receivable	1.0	
163	To Individuals & Co.		
Received this day Note payable Oct 19 1901 to Berman National Bank Newark N.J			
70	National Phone Co	500.00	

Orange N.J. June 1901

163	Individuals & Co.	3.0	
163	To Individuals & Co.		
Transferring Cash received June 1901 & credited to W B Manny to account of N T Lansing			
44	Bates Accts Rec	12.0	
214	W B Manny	12.0	
44	Bates Accts Rec	12.0	
1	N T Lansing	12.0	
163	Individuals & Co.	3.0	
163	To Individuals & Co.		
To take out of Suspense amount written off Feb 1901 same applying in settlement of our bill May 3 1901			
44	Bates Accts Rec	.07	
3	Bates Suspense	.07	
44	Bates Accts Rec	.07	
103	Consolidated Stamp & Print Co	.07	
163	Individuals & Co.	3.0	
73	To General Expense		
To correct error in transcribing P.M. 1011 from copy book into Register of Disbursements entered as 14.08 should be 14.03			
70	National Phone Co	500.00	
163	Individuals & Co.	3.0	
176	To Manufacturing		
To correct error in recording P.M. 1011 in Register of Disbursements for May 1901 entered as 17.46 should be 14.00			
710	Edison Mfg Co	13.46	
133	Box Factory	13.46	

Orange N.J. June 1901

153	Sales	30	
150	To Sales		
	To correct error in distributing amount of bill #20367 May 6-1901		
	Credited to Photograph		
	Should be Paid		
2	Photograph	1312.42	
8	Wage		1312.42
	30		
163	Individuals & Co		
163	To Individuals & Co		
	Transferring into J. & Co Ledger from Bates Acct Rec Ledger the following bill		
	May 8	31450	1.07
	12	31039	4020
	22	31679	177
5	Walter Numburing Mch Co	46.32	
44	Bates Acct Rec		46.32
2	Walter Numburing Mch Co	46.32	
	30		
163	Individuals & Co		
163	To Individuals & Co		
	Transferring Co. Exp. 29116 10-1901 from Bates Acct Rec Ledger into J. & Co Ledger		
44	Bates Acct Rec	1.00	
3	Shea Smith & Co	1.00	
4	Shea Smith & Co	1.00	
	30		
163	Individuals & Co		
163	To Individuals & Co		
	Transferring into Bates Acct Rec Ledger from J. & Co Ledger the following accounts:		
	Brooklyn Buggy Co	150.00	
	J. & Co	7.20	35
	Stewart & Co	77.459	144
105	Brooklyn Buggy Co	150.00	
12	J. & Co	35	
6	Stewart & Co	484	
44	Bates Acct Rec		2022
1	Brooklyn Buggy Co	150.00	
7	J. & Co	35	
44	Stewart & Co	484	

1312.42

1312.42

46.32

46.32

1.00

1.00

2022

484

Orange N.J. June 1901

73	General Expense	30	
163	To Individuals & Co		
	Transferring amount of Bates Extra Expense for month of June 1901 from Bates Acct Rec Ledger into J. & Co Ledger		
44	Bates Acct Rec	100.00	
72	Bates Extra Expense	100.00	
	30		
73	General Expense		
163	To Individuals & Co		
	Salary for current month		
71	Wm. A. Edison	1000.00	
	30		
163	Individuals & Co		
163	To Individuals & Co		
	Transferring Cash received from Strocker Drug Co May 27-1901 from Bates Acct Rec Ledger into J. & Co Ledger as the amount belonged to Edison Mfg Co. as it was transferred to them through Bates Cash		
44	Bates Acct Rec	16	
21	Strocker Drug Co	16	
204	Strocker Drug Co	16	
	30		
163	Individuals & Co		
	To Sundries		
	Amount of Sales for month of June 1901 as recorded in Abstract of Sales files 155 to 159 both inclusive to be credited as follows		
73	General Expense		161.12
153	Sales		40729.95
76	Manufacturing		94
	30		
153	Sales		
163	To Individuals & Co		
	2% Commission on amount of Sales of Auto Numbering Machines - Bates Mch for month of June 1901 recorded in Abstract of Sales		
	Auto Numbering Mch	6553.52	2%
14	Auto Number Mch	131.07	
46	Bates Mch	207	
101	J. & Co	133.74	

100.00

100.00

1000.00

1000.00

16

16

40729.95

161.12

40729.95

94

133.74

133.74

Orange N.J. June 1901

30		
73	General Expense	2844
163	To Individuals & Cos.	2844
	Amount of Bates Interest & Discount allowed in settlement of accounts for June 1901 as recorded in Cash Book to folio 16	
45	Bates Acc'ts Rec.	2844
30		
163	Individuals & Cos.	72
73	To General Expense	72
	Amount of Cash Discount deducted in settlement of accounts for June 1901 as recorded in Cash Book to folio 16	
17		
163	Individuals & Cos.	1020 00
122	To Note Payable	1020 00
	Bare this day our 4 months Note Payable Oct 17 - 1901 at Roman National Bank Newark in payment on account Interest added	
102	Q Weston Loan	1020 00
30		
Sundries		
163	To Individuals & Cos.	4309 145
	Amount of Invoice vouchers for month of June 1901 as recorded in Register of Disburse- ments folios 261 to 267 both inclusive chargeable to	
74	General Expense	12602 31
24	Machinery & Tools	4113
31	Furniture & Fixtures	4037
26	Real Estate & Buildings	1450
76	Manufacturing	30346 32
163	Salaries	1426
163	Individuals & Companies	5180

Orange N.J. June 1901

30		
Sundries		
76	To Manufacturing	1720 43
	Amount of Material Transfer for month of June 1901 as recorded in Register of Disbursements folio 247 chargeable to	
74	General Expense	1520 21
24	Machinery & Tools	261
76	Manufacturing	6907 61

Orange N.J. July 1901

163 Individuals & Cos

To Notes Payable

122 Have this day our Note payable No 5-1911
at German National Bank Newark N.J.
in settlement of Invs No 5-761.
Interest added @ 6%
1 Cilling & Crane 1255.73

163 Individuals & Cos

To Notes Payable

122 Have this day our Note payable No 5-1911
at German National Bank Newark N.J.
in settlement of account in full to W-1911
Interest added at 6%
101 Centies Tool & Supply Co 588.54

163 Individuals & Cos

To Notes Payable

122 Note dated July 1st payable Oct 8. 2069.17
Oct 22 2072.90
at German National Bank Newark N.J.
in settlement of account in full to May 1st
Interest added from June 1st 1901 @ 6%
102 Western & Son 4143.07

163 Individuals & Cos

To Notes Payable

122 Have this day our Note as follows in
settlement of April account in full
Invs Note 1223.50
" " 1226.00
Payable to German National Bank Newark N.J.
Interest added at 6%
1 Bridgeport Brass Co 5544.50

Orange N.J. July 1901

163 Individuals & Cos

To Individuals & Cos

163 Transferring Inv No 1911. Stewart & Co
from National Phonograph Co Books
to Bates Acct Rec Ledger same having
been deducted in settlement July 11, 1901

71 National Phon Co

Bates Acct Rec

Stewart & Co

163 Individuals & Cos

To Individuals & Cos

163 Transferring from Tr Co Ledger into
Bates Acct Rec Ledger the following items

105 Brog Keper Autly Co Inv

6 Stewart & Co

714 Bates Acct Rec

8 Brog Keper Autly Co

716 Stewart & Co

71 General Expenses

163 To Individuals & Cos

To allow \$1. Cash Direct from bills No 1911
& No 109 76.50 Total 24.69

Not previously deducted Total

714 Bates Acct Rec

101 Geo H Hewitt

163 Individuals & Cos

To Individuals & Cos

To transfer Cash credited to M Backrach
Son to account of J.P.W. German Co
owner of Bangs in charge of collection

714 Bates Acct Rec

107 M Backrach & Son

715 Bates Acct Rec

100 J.P.W. German Co

Orange N.J. July 1901

74	General Expense	31	100.00	
163	To Individuals & Co.		100.00	
	Amount of Bates Extra Expense for month of July 1901 transferred to General Ledger from Bates Accts Rec Ledger.			
14	Bates Accts Rec	100.00		
72	Bates Extra Expense	31	100.00	
74	General Expense	31	47.22	
163	To Individuals & Co.		47.22	
	Amount of Bates Interest & Discount allowed in settlement of accounts during month of July 1901 as recorded in Cash Book & folios 17 to 22 both inclusive			
14	Bates Accts Rec	47.22		
74	General Expense	31	100.00	
163	To Individuals & Co.		100.00	
17	Salary for month of July 1901			
17	S. A. Carrow	100.00		
162	Individuals & Co.	31	4202.36	
	To Sundries			
	Amount of Sales for month of July 1901 as recorded in Sales Sales folios 161 to 165 both inclusive to be credited as follows			
74	General Expense		119.39	
153	Salv.		41,897.21	
176	Manufacturing	31	2.76	
153	Salv.	31	90.90	
163	To Individuals & Co.		90.90	
24	Commission on Sales of Anti Humming Birds			
	Bates Made for month of July 1901 as recorded in Abstract of Sales folio 165			
14	Anti Humming Birds	4472.20	24	82.45
	See list for Anti Humming Birds	80.20		26
66	Bates Made	116.06	per	232.46
		4455.06		90.90
151	J. H. Gladstone			90.90

Orange N.J. July 1901

162	Individuals & Co.	31	46.00	
162	To Individuals & Co.		46.00	
	Transferring Accounts Payable Voucher 14523 dated June 24 1901 to account of Geo. Meier & Co. posted in error to account of Jos. Meier & Sons			
5	Jos. Meier & Sons	46.00		
161	Geo. Meier & Co.		46.00	
162	Individuals & Co.	31	247.50	
162	To Individuals & Co.		247.50	
	Transferring Accounts Payable Voucher 13973 dated May 21 1901 from account of Goodyear Vulcanite Co. to account of Vulcanized Rubber Co. their successors			
162	Goodyear Vulcanite Co.	247.50		
260	Vulcanized Rubber Co.	247.50		
	To Sundries			
162	To Individuals & Co.		4202.37	
	Amount of Advances Voucher during month of July 1901 as recorded in Register of Advances - amounts folios 249 to 255 both inclusive & chargeable to			
74	General Expense		1148.35	
24	Machinery & Tools		166.43	
31	Furniture & Fixtures		16.19	
176	Manufacturing		3132.46	
153	Salv.		40	
162	Individuals & Companies	31	72.91	
	To Sundries			
176	To Manufacturing		90.81	
	Amount of Material Transfers for month of July 1901 as recorded in Register of Disbursement - folio 256 chargeable to			
74	General Expense		1490.67	
24	Machinery & Tools		16.77	
176	Manufacturing		7522.47	

Orange N.J. August 1901.

74	General Expense	34	1000.00	
164	To Individuals & Co		1000.00	
164	Salary for month of August 1901			
17	Phos of Edison	1000.00		
164	Individuals & Co	4545.66		
153	To Notes Payable		4545.66	
	Notes issued as follows in settlement of account to July 26 1901 payable 4 months from date of issue R German National Bank			
	Note dated Aug 4 payable Dec 8	1185.66		
	" " " 18	1500.00		
	" " " 25	550.00		
12	Bridgeport Chase Co	4185.66		
164	Individuals & Co	30.00		
154	To Individuals & Co		30.00	
	Transferring amount of Cr 23125 750-1901 to account of Rantier Bank & Trust Co. the same having been deducted in settlement of account this day			
44	Date Acct Rec	20.00		
214	Ch Weyler	20.00		
44	Date Acct Rec	20.00		
218	Rantier Bank & Trust Co	20.00		
164	Individuals & Co	150.00		
164	To Individuals & Co		150.00	
	Transferring from V Co Ledger into Date Acct Rec Ledger the amount of \$100 dated July 27 1901			
108	Boeckhner Publishing Co	150.00		
44	Date Acct Rec	150.00		
8	Boeckhner Publishing Co	150.00		
74	General Expense	125.00		
164	To Individuals & Co		125.00	
	Transferring amount of Date Extra Expense from Date Acct Rec Ledger into General Ledger			
44	Date Acct Rec	125.00		
74	Date Extra Expense	125.00		

Orange N.J. August 1901.

164	Individuals & Co	200.1		
164	To Individuals & Co		200.1	
	Transferring balance due from Shattuck & Krueger to account of Krueger Mfg Co. their successors			
44	Date Acct Rec	20.01		
101	Krueger Mfg Co	20.01		
44	Date Acct Rec	20.01		
104	Shattuck & Krueger	20.01		
164	Individuals & Co	75		
164	To Individuals & Co		75	
	Transferring amount of Cash returned to R. Schuchman Mfg Co. through City Cash from I Co Ledger into Date Acct Rec Ledger to balance account			
44	Date Acct Rec	75		
213	R. Schuchman Mfg Co	75		
205	R. Schuchman Mfg Co	75		
164	Individuals & Co	46352.23		
	To Sundries			
	Amount of Sales for month of August 1901 as recorded in Abstract of Sales folio 187 to 171 both inclusive to be credited to			
74	General Expense	139.56		
153	Sales	46352.17		
153	Sales	10619		
164	To Individuals & Co		10619	
	31. Commission on Sales of Auto Hand Machine & Date Wdow for month of August 1901 as recorded in Abstract of Sales folio 171			
14	Automatic Handwriting Machine	507.72 of 10000		
66	Date Merchandise	507.72		
		5309.91		
101	J W Gladstone	10619		

Orange N.J. August 1901

150	Sales	31	118527
153	To Sales		118527
	To correct distribution of Rec. # 31033 dated July 17-1901 which was credited to Special Ship Order in error should be		
	Material Sales 530.00 Misc 958.37		
109	Special Ship Order #267	118527	
56	Material Sales	200.00	
26	Miscellaneous	958.37	
	31		
74	General Expense		3544
160	To Individuals & Cos		2891
	Amount of Sales Discount allowed in settlement of accounts during month of August 1901 as recorded in Cash Book		
	20 folios 23 to 27 both inclusive		
46	Cash Accts Rec	2844	
	31		
160	Individuals & Cos		233
74	To General Expense		233
	Amount of Cash Discount deducted in settlement of accounts during month of August 1901 as recorded in Cash Book 5 folios 23 to 27 both inclusive		
	31		
161	Sundries		462558
	To Individuals & Cos		
	Amount of Invoices vouchered during month of August 1901 as recorded in Register of Disbursements folios 257 to 262 both inclusive chargeable to		
74	General Expense	10851.90	
54	Machinery & Tools	1640.17	
31	Furniture & Fixtures	396	
176	Manufacturing	24160.95	
161	Individuals & Companies	6687	

Orange N.J. August 1901

	Sundries	31	
176	To Manufacturing		541714
	Amount of Material Transfers for month of August 1901 as recorded in Register of Disbursements folio 262 chargeable to		
74	General Expense	21194.1	
54	Machinery & Tools	153	
176	Manufacturing	626113	

Orange N.J. September 1901

164	Individuals & Cos	10222.0	
22	To Notes Payable	1000.00	
Notes issued this day payable Jan 2-1902 at American National Bank Newark N.J. reversing Note of Sept 7-1901 2000 each			
1	Sam's Invoice	4000.00	
164	Individuals & Cos	3502.60	
22	To Notes Payable	3502.60	
Notes issued this day in settlement of account in full to Aug 1st 1901 payable at American National Bank Newark N.J.			
	Invoice payable Dec 6-1901	1746.17	
	" " " Jan 6-1902	1756.43	
	Interest added @ 6% from Aug 8 average due date		
9	J. Weston & Son	3502.60	
22	Notes Payable	3033.57	
164	To Individuals & Cos	3033.57	
Note dated May 24-1901 payable this day @ American National Bank Newark N.J. returned & renewed			
204	Conbrook Steam Boilers Co	3033.57	
164	Individuals & Cos	2000.00	
22	To Notes Payable	2000.00	
Note dated this day payable Jan 24-1902 at American National Bank Newark N.J. reversing our Note dated May 24-1901 and interest @ 6% per annum			
204	Conbrook Steam Boilers Co	2000.00	
164	Individuals & Cos	310	
164	To Individuals & Cos	310	
Transferring amount of collection charges up our claim vs. E. G. Shreve from S. C. Cos Ledger into Bates Accts Rec. Ledger			
204	Associated Merchants of N.Y.	310	
46	Bates Accts Rec	310	
210	Associated Merchants of N.Y.	310	

Orange N.J. September 1901

164	Individuals & Cos	1020	
164	To Individuals & Cos	1020	
Transferring from S. C. Cos Ledger into Bates Accts Rec. Ledger amount of Invoice dated Sept 7-1901 same to apply in settlement of our bill 7/12-1901			
204	Southern Industrial News	10.00	
46	Bates Accts Rec	10.00	
220	Southern Industrial News	10.00	
164	Individuals & Cos	1534	
164	To Individuals & Cos	1534	
Transferring balance due from E. G. Shreve to account of Associated Merchants of N.Y. for collection			
46	Bates Accts Rec	15.34	
210	Associated Merchants of N.Y.	15.34	
46	Bates Accts Rec	15.34	
217	E. G. Shreve	15.34	
164	Individuals & Cos	2312	
164	To Individuals & Cos	2312	
Transferring from S. C. Cos Ledger into Bates Accts Rec. Ledger the following items			
105	Borg & Phipps Publishing Co. New York	15.00	
201	E. G. & Rubie	56.2	
101	Library Bureau	2.50	
46	Bates Accts Rec	2312	
8	Borg & Phipps Pub. Co	150	
103	E. G. & Rubie's	56.2	
3	Library Bureau	2.50	
164	Individuals & Cos	40	
164	To Individuals & Cos	40	
Transferring amount returned to Carson Bates Accts Rec. Ledger Sept 11-1901 from S. C. Cos Ledger into Bates Accts Rec. Ledger			
46	Bates Accts Rec	40	
204	Carson Bros Accts Co	40	
204	Carson Bros Accts Co	40	

Orange, N.J. September 1901.

74	General Expense	20	2791
161	To Individuals & Cos.		
	Amount of Bates Interest discount allowed on settlement of account during month of Sept. 1901. as recorded in Cash Book of 15 folios 21 to 33 both inclusive		
74	Bates Accts Rec.	2791	
75	General Expense	30	100.00
161	To Individuals & Cos.		
	Transferring from Bates Accts Rec. Ledger into General Ledger amount of Bates Extra Expenses for month of Sept. 1901.		
74	Bates Accts Rec.	100.00	
75	Bates Extra Expense	100.00	
74	General Expense	30	1000.00
161	To Individuals & Cos.		
	Salary for month of September 1901		
75	Wm. Q. Edison	1000.00	
161	To Individuals & Cos.		
	To Sundries		
	Amount of Sales for month of September 1901 as recorded in Abstract of Sales folios 173 to 177 both inclusive to be credited to		
74	General Expense		
163	Sales		19331
176	Manufacturing		443923
153	Sales	30	100
164	To Individuals & Cos.		
	Commission on Sales of Auto Mumb Machine and Bates Mdee for month of September 1901 as recorded in Sales folios 177		
14	Auto Mumb Machine	4573.61	9037
66	Bates Merchandise	171.21	322
101	J.W. Gladstone	4709.82	9419
			9419

Orange, N.J. September 1901.

✓	Sundries	30	
164	To Individuals & Cos.		443923
	Amount of Services rendered during month of September 1901 as recorded in Register of Disbursements folios 264 to 269 both inclusive		
	Charged to		
74	General Expense	1924.09	
24	Machinery & Tools	38.65	
31	Sundries & Friction	1.05	
176	Manufacturing	51426.0	
164	Individuals & Companies	444.46	
✓	Sundries	30	
176	To Manufacturing		7645.86
	Amount of Material Transfers for month of September 1901 as recorded in Register of Disbursements folios 269 charged to		
74	General Expense	1842.09	
24	Machinery & Tools	38.65	
176	Manufacturing	5100.27	

Orange N.J. October 1901

56	Notes Receivable	10	3000.00	
160	To Individuals & Cos		3000.00	
	Note dated this day payable Feb'y 1-1902			
	to Herman National Bank Newark N.J.			
	to apply on account			
76	National Phone Co	20	3000.00	
161	Individuals & Cos		2205.26	
122	To Notes Payable		2205.26	
	Note issued this day payable Jan 30-1902			
	at Herman National Bank Newark to apply			
	on account Interest added from Nov 1			
	average due date 10.6% per annum			
9	Q Weston & Son	21	2205.26	
56	Notes Receivable	21	3000.00	
161	To Individuals & Cos		3000.00	
	Note dated this day payable Feb'y 31-1902			
	to Herman National Bank Newark N.J.			
	to apply on account			
76	National Phone Co	24	3000.00	
161	Individuals & Cos		2217.97	
122	To Notes Payable		2217.97	
	Note issued this day payable Feb'y 31-1902			
	to Herman National Bank Newark N.J.			
	in settlement of account to Oct 1st 1901			
	Interest added from Nov 1			
	average due date 10.6% per annum			
9	Q Weston & Son	21	2217.97	
161	Individuals & Cos		1250.00	
161	To Individuals & Cos		1250.00	
	Transferring amount of Invoice dated June			
	27th 1901 which was included in acct			
	settlement by Note dated July 15-1901 in error			
76	National Phone Co	125.00		
101	Painter Tool & Supply Co	125.00		

Orange N.J. October 1901

161	Individuals & Cos	31		
160	To Individuals & Cos		140.00	140.00
	To write off amount of Rec 1903rd dated			
	Nov 16-1898 the same being uncollectable			
44	Bates Accts Rec	140.00		
3	Bates Expenses	140.00		
44	Bates Accts Rec	140.00		
200	G. H. Taylor	140.00		
161	Individuals & Cos	31		
161	To Individuals & Cos		2199	2199
	Transferring from To Cos Ledger into			
	Bates Accts Rec Ledger the following			
	items			
105	Brookkeeper Publishing Co	15.00		
6	Stewart & Co	7.50		
4	Shear Smith & Co	6.50		
42	Bates Accts Rec	28.99		
8	Brookkeeper Pub'g Co	15.00		
76	Stewart & Co	7.50		
5	Shear Smith & Co	6.50		
74	General Expenses	31		
161	To Individuals & Cos		4327	4327
	Amount of Bates Interest and Discount			
	allowed in settlement of account for month			
	of October 1901 as recorded in Cash Book 5			
	folios 34 to 39 both inclusive			
44	Bates Accts Receivable	4327		
74	General Expenses	31		
161	To Individuals & Cos		100.00	100.00
	Transferring amount of Bates Extra			
	Expenses for month of October 1901 from			
	Bates Accts Rec Ledger into General Ledger			
44	Bates Accts Receivable	100.00		
72	Bates Extra Expenses	100.00		

Orange N.J. October 1911

	General Expenses	\$1	100.00	
74	To Individuals & Co.			100.00
164	Salary for current month			
76	Phos. of Edison	1.2	1000.00	
164	Individuals & Co.		1177.81	1177.81
122	To Notes Payable			
	Mortgage & this day payable Jan. 12 - 1902 at Hermann National Bank New York NY in settlement of account in full to Oct. 1901 163: Hermann Lehman & Co. 1177.81			
	\$1			
164	Individuals & Co.		709,293	
	To Sundries			
	Amount of Sales for month of October 1901 as recorded in Abstract of Sales \$119 to 113 less inclusive to be credited as follows			
74	General Expenses			394.21
163	Sales			7657.37
	\$1			
163	Sales		104.28	
164	To Individuals & Co.			104.28
	2% Commission on Sales of Auto Mould Mchrs. 4 Bats Mchrs for October 1901 as recorded in Abstract Sales \$153.			
14	Auto Mould Machines	5022.25		
	Less Paid " 1901 To 1902 initially to Eugene Horn	4400		
	5022.25 of	100.00		
66	Bats Mchrs	125.96	2.55	
	5214.21 "	104.28		
101	J W Chadstone		104.28	
	\$1			
	Sundries			
176	To Manufacturing			142.97
	Amount of Material Transfers for month of October 1901 as recorded in Register of Disbursement for 1901 chargeable to			
74	General Expenses		2852.73	
28	Machinery & Tools		61	
176	Manufacturing		1142.97	1142.97

Orange N.J. October 1901

	Tenndries	\$1	
16d	To Individuals & Co.		87.17.65
	Amount of Services rendered during month of October, 1901 as recorded in Register of Substantive Sales 27.1 b. 27.8 both inclusive. Chargeable to		
7d	General Expense		19.64.52
2d	Machinery & Tools		803.69
31	Gumming & Furniture		37.56
14g	Road Carts & Buildings		875.00
17d	Manufacturing		5197.88
16d	Individuals & Companies		9.20

Orange N.J. November 1901

30			
Dividend			
To Individuals & Co.			
For a dividend of 1 st per share on all stock of the Company entitled thereto as per resolution of Board of Directors at a Special Meeting held at Orange N.J. on May 7 th 1901			
Dividend on 7			
181 Thos Q Edison	3072.21 shares	3072.21	✓
100 John F Randolph	10	15.00	✓
100 Mrs Thos Q Edison	50	45.00	✓
101 W E Edmore	5	7.50	✓
1 Samuel Insull	5	7.50	✓
102 Chas Batchelor	248.44	372.66	✓
101 H B Archimedes	250	375.00	✓
100 International Graphophone Co.	1430.	2145.00	✓
102 John E Searles	5	7.50	✓
100 J T M Cheney	5	7.50	✓
102 Jas O W Cutting	106.75	655.13	✓
102 Walter Cutting	317	475.50	✓
	4814.40	7221.60	

Orange N.J. November 1901

30			
Dividend			
To Individuals & Co.			
For a dividend of 1 st per share on all stock of the Company entitled thereto paid Aug 1 1901			
Dividend on 7			
181 Thos Q Edison	3072.21	3072.21	✓
100 John F Randolph	10	12.50	✓
100 Mrs Thos Q Edison	50	37.50	✓
101 W E Edmore	5	6.25	✓
1 Samuel Insull	5	6.25	✓
101 H B Archimedes	250	312.50	✓
102 Chas Batchelor	248.44	310.55	✓
100 International Graphophone Co.	1430.	1787.50	✓
102 John E Searles	5	6.25	✓
100 J T M Cheney	5	6.25	✓
102 Jas O W Cutting	106.75	345.94	✓
102 Walter Cutting	317	396.25	✓
	4814.40	6018.00	

30			
Dividend			
To Individuals & Co.			
For a dividend of 1 st per share on all stock of the Company entitled thereto as per resolution of the Board of Directors at a Special Meeting held at Orange N.J. Nov 1 st 1901			
Dividend on 7			
181 Thos Q Edison	3072.21	3598.26	✓
100 John F Randolph	10	12.50	✓
100 Mrs Thos Q Edison	50	37.50	✓
101 W E Edmore	5	6.25	✓
1 Samuel Insull	5	6.25	✓
102 Chas Batchelor	248.44	310.55	✓
101 H B Archimedes	250.00	312.50	✓
100 International Graphophone Co.	1430.	1787.50	✓
102 John E Searles	5	6.25	✓
100 J T M Cheney	5	6.25	✓
102 Jas O W Cutting	106.75	345.94	✓
102 Walter Cutting	317	396.25	✓
	4814.40	6018.00	

Orange NJ November 1901

74	General Expense	30	2066	2066
111	To Individuals & Cos			
	To allow 3% Cash Discount on Net purchases for May, June, July, Aug, Sept, Oct, & Nov 1901 not previously deducted			
	Month	Per Cent		
	May	3%	11.02	
	June		7.91	
	July		4.59	
	Aug		3.90	
	Sept		3.97	
	Oct		4.85	
	Nov		228	
			1612.11	2066
74	Notes Accts Rec	3326		
1	Nett Phon Co For Dept	30.66		
74	General Expense	30	2072	2072
111	To Individuals & Cos			
	Amount of Notes Interest & Discount allowed in settlement of accounts during month of Nov. 1901 as recorded in Cash Rec'd & plus \$10.50 to be set in clearing			
74	Notes Accts Rec	2072		
74	General Expense	30	125.00	125.00
111	To Individuals & Cos			
	Transferring amount of Notes Extra Expense for month of November 1901 from Notes Accts Rec Ledger into General Ledger			
74	Notes Accts Rec	125.00		
74	Notes Extra Expense	125.00		
74	General Expense	30	1000.00	1000.00
111	To Individuals & Cos			
	Salary for current month			
74	Phos of Edison	1000.00		

Orange NJ November 1901

74	General Expense	30	2077	2077
111	To Manufacturing			
	To correct distribution of Material Transfer Voucher 2566, dated Oct 5, 1901, the above amount being changed to Raw Material instead of General Expense.			
	Month	2077		
	Sept	252.1		
	Oct	252.1		
	Nov	252.1		
		2077		
74	Cr Raw Material	2077		
111	To Individuals & Cos			
111	Transferring from Dr Crs Ledger into Notes Accts Rec Ledger the following items			
201	Pelton Cddy Co	10		
6	Stewart & Co	14		
204	Whites Sapping Cddy Co	3.90		
74	Notes Accts Rec	14.08		
201	Pelton Cddy Co	10.00		
74	Stewart & Co	14		
204	Whites Sapping Cddy Co	3.90		
74	General Expense	30	75	75
111	To Individuals & Cos			
	To transfer amount paid by Edison Mfg Co for our account to Eric P.P. Co in error - Later Freight for Oct voucher through Mfg Co Register of Disbursements			
74	Eric P.P. Co	75		
74	Edison Mfg Co	75		
74	General Expense	30	310	310
111	To Individuals & Cos			
	To transfer amount of collection charges on account of W.H. Reed from Dr Crs Ledger into Notes Accts Rec Ledger			
74	Associated Merchants of N.Y.	310		
74	Notes Accts Rec	310		
74	W.H. Reed	310		

Orange NJ November 1901

181	Individuals & Co.	30	66,122.57
	To Sundries		
	Amount of Sales for month of November 1901 as recorded in Abstract of Sales folios 182 to 185 both inclusive to be credited to		
182	General Expense	20,191.	
183	Sales	65,920.66	
183	Sales	30	111.94
181	To Individuals & Co.		111.94
	2% Commission on Sales of Auto Number Mache & Sales Made for month of November 1901 as recorded in Abstract Sales folio 188		
182	Auto Numbering Machine	507.49	107.75
186	Rates Merchandise	209.40	41.2
7	J. W. Gladstone		111.94
74	General Expense	30	33.75
	To Sundries		
	To correct distribution of bill 30702 16 ⁰⁰ & P.M. 1901 17 ²⁵ credited to General		
	Expense in error		
176	Manufacturing		17.75
177	Miscellaneous		
183	Sales	17.75	
36	Miscellaneous	16.00	
	Sundries	30	
181	To Individuals & Co.		64,872.58
	Amount of Invoices vouchered during month of November 1901 as recorded in Register of Disbursements folios 210 to 216 both inclusive chargeable to		
74	General Expense	10,370.42	
189	Machinery & Tools	484.99	
176	Manufacturing	51,045.56	
181	Individuals & Co.	171.40	

Orange NJ November 1901

	Sundries	30	
176	To Manufacturing		15,726.04
	Amount of Material Transfers for month of November 1901 as recorded in Register of Disbursements folio 216 chargeable to		
74	General Expense	2,980.61	
189	Machinery & Tools	22	
176	Manufacturing	12,745.94	

Orange 27 December 1901

167	General Expense	31	5021
168	To Individuals & Co.		370.21
	Amount of Rate, Interest & Discount allowed in settlement of accounts during month of December 1901 as recorded in Cash Book & folios 46 to 52 both inclusive		
74	Rate Acc'ts Rec.	5021	
181	Individuals & Co.	31	63127.67
	To Sundries		
	Amount of Sales for month of December 1901 as recorded in Abstract of Sales folios 159 to 194 both inclusive to be credited as follows		
161	General Expense		9337
162	Sales		63694.30
163	Machinery & Tools		4000
164	Manufacturing		10
165	Sales		9810
181	To Individuals & Co.		9810
	2% Commission on Sales of Cuts & Hand Mache & Rate Merchandise for month of Dec 1901 as recorded in Abstract Sales folio 194		
165	Cuts & Handing Machine	4257.21 of 9257	
64	Rate Merchandise	278.40	5554
		4905.14	9810
7	J. H. Gladstone	31	9810

167	Sundries	31	75711.57
	To Individuals & Co.		
	Amount of services rendered during December 1901 as recorded in Register of Disbursements folios 211 to 294 both inclusive chargeable to		
167	General Expense		13791.74
168	Machinery & Tools		905.26
31	Manufacturing - Sublet		4.08
165	Rate Sundries - Sublet		23.00
166	Manufacturing		60570.35
181	Individuals & Companies		401.8

Orange 27 December 1901

	<i>Sundries</i>	31	
176	<i>To Manufacturing</i>		18823.79
	<i>Amount of Material Transferred during month of December 1901 as recorded in Register of Disbursements folio 294 chargeable to</i>		
167	<i>General Expense</i>		5212.40
168	<i>Machinery & Tools</i>		77.59
176	<i>Manufacturing</i>		15534.00

Orange NJ January 1902

11	Individuals & Co.	4000.00
12	To Notes Payable	1000.00
Two Note of 5000 each payable March 1902		
4 Apr and 1902 respectively at German National Bank Newark NJ renewing note due this day bearing interest @ 6% per annum		
1	Drawn & Payable	4000.00
	Note dated this day	3000.00

11	Individuals & Co.	27.50
12	To Individuals & Co.	27.50
Received this day Note payable one month after date at Manhattan National Bank New Haven Conn in settlement of account to Dec 1-1901 Interest added from Dec 9th @ 6% per annum		
44	Notes Acct Rec	27.50
101	Notes Notes Receivable	27.50
44	Notes Acct Rec	27.50
100	Valentine Stamp Co	27.50

11	Individuals & Co.	27.50
12	To General Expense	27.50
Interest added to Note received this day from Valentine Stamp Co payable Feb 9-1902		
Account as per Ledger		
	Amount of face of Note	27.50
	60 day Interest @ 6%	.27
44	Notes Acct Rec	.27
100	Valentine Stamp Co	.27

11	Individuals & Co.	1609.42
12	To Notes Payable	1609.42
Accepted Draft this day payable four months after date at German National Bank Newark NJ applying on Acc account Interest added from Feb 12th @ 6% per annum		
9	Whiston & Son	1609.42

Orange NJ January 1902

11	Individuals & Co.	902.48
12	To Notes Payable	902.48
Accepted Draft this day payable one month after date at German National Bank Newark NJ in settlement of account to Jan 1st 1902		
5	American Oil & Supply Co	902.48

11	Individuals & Co.	1609.42
12	To Notes Payable	1609.42
Accepted Draft this day payable one month after date at German National Bank Newark NJ in settlement of Acc account less Five 1728.50 + 1728.50 = 3457.00 Interest added from Feb 22-1902 @ 6% per annum		
9	Whiston & Son	1609.42

12	Notes Payable	2000.00
11	To Individuals & Co.	2000.00
To Cancel our Note dated Sept 24-1901 same being renewed this day		
105	Combs & Stearns Carlin Co	2000.00

11	Individuals & Co.	1000.00
12	To Notes Payable	1000.00
Accepted Draft this day payable four months after date at German National Bank Newark NJ renewing our note of Sept 24-1901 bearing interest @ 6% per annum		
105	Combs & Stearns Carlin Co	1000.00

17	Manufacturing	76
16	To General Expense	76
To correct error in distribution of Material transfer Voucher 7624 items credited to Raw Material instead of General Expense		
153	Raw Material	76

Orange, N.J. January 1902

151	Individuals & Co.	500	
151	To Individuals & Co.		100
	Transfer to correct entry in Bates Sales		
	Bates Sales 26693 changed to Richard Anderson Co.		
	Should be Rutland Indus Co.		
151	Bates Accts Rec	800	
150	Rutland Indus Co	800	
151	Bates Accts Rec	800	
211	Richard Anderson Co	800	
157	General Expenses	235	
151	To Individuals & Co.		235
	To allow 2% cash discount on the following		
	accounts entitled thereto and not previously		
	deducted		
151	Bates Accts Rec	235	
215	Montague & Co	16	
217	Sawyer & Meyer	11	
1	MJ Force & Co	198	
151	Individuals & Co.	12221	
151	To Individuals & Co.		12221
	Transferring from St. Co. Ledger into		
	Bates Accts Rec Ledger the following items		
150	MJ Force & Co. Am 16.20 16.20 16.20 16.20	84.80	
6	Stewart & Co	77 1.00 77.00 77.00	2.01
4	Shea Smith & Co	74.96 74.96	26.00
151	Bates Accts Rec	12221	
1	MJ Force & Co	84.80	
36	Stewart & Co	2.01	
3	Shea Smith & Co	26.00	
157	General Expenses	487	
151	To Individuals & Co.		487
	To allow 2% cash discount on Net Sales made		
	during December 1901		
	Debit	246.22	
	Credit	500	
		246.22	
151	Bates Accts Rec	487	
1	National Trust Co. Foreign Dept	487	

Orange, N.J. January 1902

✓	Surveys	31	
176	To Manufacturing		1120.24
	To transfer amount of Labor & Material charged		
	to Shop Order 12524 up to and including Nov 19 1901		
	from Miscellaneous to Edison Motor account		
	also Labor & Material charged to special shop		
	Order 2496 up to and including Nov 19 1901 from		
	Miscellaneous to Machinery & Tools account		
176	Manufacturing		555.12
153	St. Edison Motor	555.12	
156	C. Miscellaneous	555.12	
159	Machinery & Tools		235.12
260	Miscellaneous	235.12	
151	Individuals & Co.	31	
151	To Individuals & Co.		64
	To transfer from St. Co. Ledger into Bates		
	Accts Rec Ledger amount of Am 117-1902		
200	Town Mfg. Co.	64	
151	Bates Accts Rec	64	
210	Town Mfg. Co.	64	
151	Individuals & Co.	20	
151	To Note Payable		1844.22
	Give this day our Note payable 6 months		
	after date to German National Bank Newark		
	to apply on Nov. acct. Interest added @ 6% per		
	annum		
151	Bridgeport Brass Co	1844.22	
151	Individuals & Co.	28	
151	To Note Payable		1844.22
	Give this day our Note payable 6 months		
	after date to German National Bank Newark		
	in settlement of November account. Interest		
	added @ 6% per annum		
151	Bridgeport Brass Co	1844.22	

Orange NJ January 1902

153	Sales	31	9000	
153	To Sales		9000	
	To correct distribution of Rates Bill 5491			
	Credited to Auto Mount Mchrs instead of Bates Mchrs			
14	Auto Mounting Machines	9000		
66	Bates Merchandise	9000		
157	General Expenses	31	12500	
157	To Individuals & Co		12500	
	To transfer amount of Rates Extra Expenses			
	Incurred in January 1902 from Bates Accts			
	Rec. Ledger into General Ledger			
45	Bates Accts Rec	12500		
72	Bates Extra Expenses	12500		
157	General Expenses	31	100000	
157	To Individuals & Co		100000	
	Salary for current month			
79	Phos & Edison	100000		
157	Individuals & Co	31	875	
157	To Individuals & Co		875	
	To transfer from B & Co into Bates Accts Rec			
	Ledger amount of Cash returned by us			
	through Bates Cash to Edison Mfg Co books			
45	Bates Accts Rec	875		
50	P C Allen	875		
202	P C Allen	875		
157	General Expenses	31	6511	
157	To Individuals & Co		6511	
	Amount of Bates Interest & Discount allowed			
	in settlement of account during current			
	month as recorded in Cash Book 50 folios			
	51 to 57 both inclusive			
75	Bates Accts Rec	6511		

Orange NJ January 1902

157	Individuals & Co	31	52791.16	
157	To Sundries		52791.16	
	Amount of Sales for month of January 1902			
	as recorded in Abstract of Sales folios 195 to			
	200 both inclusive to be credited as follows			
157	General Expenses		11571	
157	Sales	31	52791.16	
157	To Individuals & Co		12228	
157	To Commission on Sales of Auto Mount Mchrs		12228	
	Bates Mchrs for the month of January 1902			
	as recorded in Abstract of Sales folios 200			
14	Auto Mount Machines	5705.57	28	116.11
66	Bates Merchandise	508.28		
	Imputed Credited to B & Co in Memo 40			
	20661.28 617			
7	J H Gladstone	31	12328	
157	Sundries	31	51795.11	
157	To Individuals & Co		51795.11	
	Amount of Invoice vouchers during month			
	of January 1902 as recorded in Register of			
	Rebursment folios 296 to 301 both inclusive			
	chargeable to			
157	General Expenses		10085.16	
157	Machinery & Tools		20628	
31	Insurance & Postages		112.19	
26	Real Estate & Buildings		824.19	
176	Manufacturing		42117.94	
157	Individuals & Co	31	5505	
157	Sundries	31	13793.12	
157	To Manufacturing		13793.12	
	Amount of Material transferred during month			
	of January 1902 as recorded in Register of			
	Rebursment folios 302 chargeable to			
157	General Expenses		2210.79	
157	Machinery & Tools		121.85	
176	Manufacturing		11386.34	

Orange N.J. February 1902.

56	Notes Receivable	10	2500.00
112	To Individuals & Co.		2500.00
	Received this day National Photo Co note payable four months after date at Luman National Bank Newark N.J. applying on account		
250	National Photograph Co.	10	2500.00
112	Individuals & Co.		631.12
122	To Notes Payable		631.12
	Accepted draft this day payable one month after date at Luman National Bank Newark N.J. in settlement of Inv'ds 1902		
11	Smith & Nichols	20	631.12
165	Dividend		601.800
182	To Individuals & Co.		601.800
	For a dividend of 12 ¹ / ₂ per share on all stock of the Company entitled thereto as per resolution of the Board of Directors at a special Meeting held at the Edison Laboratory West Orange N.J. Monday Feb. 10-1902 at 9 o'clock A.M. Dividend 70		
102	Chas. Dalkheimer	50	100.00
100	M ^r Phil A. Edison	50	100.00
101	M ^r A. C. Davidson	50	100.00
1	Samuel Insull	5	6.25
100	International Graphophone Co.	11.90	119.00
19	Phil A. Edison	2072.21	20722.10
104	John F. Davidson	10	10.00
106	John C. Edison	5	6.25
102	John C. Davidson	5	6.25
106	J. S. McChesney	5	6.25
105	Geo. W. Cutting	436.75	4367.50
106	Walter Cutting	31.7	317.00
		11814.40	6018.00

Orange N.J. February 1902.

56	Notes Receivable	21	2500.00
182	To Individuals & Co.		2500.00
	Received this day National Photo Co Note payable four months after date at Luman National Bank Newark N.J. to apply on account		
271	National Photograph Co.	28	2500.00
182	Individuals & Co.		75
	To Individuals & Co.		75
	To take out of Bates Suspense the amount of Inv'ds 1901 which was written off Feb 1901		
415	Bates Accts Rec	75	
3	Bates Suspense	75	
70	Bates Accts Rec	75	
224	C. W. Davidson	75	
182	Individuals & Co.		19.86
182	To Individuals & Co.		19.86
	To transfer from Bates Accts Rec Ledger into C. W. Davidson the following items		
	Dividend & Co. Inv'ds 1901 1/2% 25	25	
	Proofsper Publishing Co. 1/2% 15.00	15.00	
415	Bates Accts Receivable	19.86	
70	Stewart & Co.	4.16	
8	Proofsper Pub'g Co.	15.00	
6	Stewart & Co.	4.16	
105	Proofsper Pub'g Co.	15.00	
182	Individuals & Co.		130
182	To Individuals & Co.		130
	To correct error in posting Bates Accts Rec 1901		
	same being posted to debit of Scarff & O'Connor instead of Scarff Tag Label & O'Connor		
415	Bates Accts Rec	130	
100	Scarff Tag Label & O'Connor	130	
70	Bates Accts Rec	130	
6	Scarff & O'Connor Co.	130	

Orange, N.J. February 1902

176	Manufacturing	21		
167	To General Expenses			
	To correct error in distribution of Raw			
	Material Voucher #6478 dated Jan 16-1902			
	5 gals Kerosene chgs to BE should be Japanning			
12	dr Japanning	38		
		21		
167	General Expenses		6086	
172	To Individuals & Cos.			
	To allow 24 Cash Direct on Net purchases			
	during month of January 1902			
	Dr Net purchases	518.53		
	Credits	520		
		318.03		
45	Bates Accts Rec		6.36	
1	National Phono Co For Dept.		6.36	
		28		
172	Individuals & Cos.		2433	
172	To Individuals & Cos.			
	Transfer to balance account of National			
	Photograph Co Chicago			
172	National Phono Co Chicago	24.33		
45	Bates Accts Rec	24.33		
2	National Phono Co Chicago	24.33		
		28		
172	Individuals & Cos.		25.00	
172	To Individuals & Cos.			
	To transfer from S & Co Ledger into Bates			
	Accts Rec Ledger amount of Jan 16-1902			
200	B. A. Kelly Co	25.00		
45	Bates Accts Rec	25.00		
101	B. A. Kelly Co	25.00		
		28		
167	General Expenses		1000.00	
172	To Individuals & Cos.			
	Salary for current month			
14	Thos G. Edison	1000.00		

Orange, N.J. February 1902

167	General Expenses	28		
172	To Individuals & Cos.		1000.00	1000.00
	Transferring amount of Bates Extra			
	Expenses for current month from Bates			
	Accts Rec Ledger into General Ledger			
45	Bates Accts Rec	1000.00		
72	Bates Extra Expenses	1000.00		
		28		
176	Manufacturing		5925.57	
176	To Manufacturing			5925.57
	Transferring to Miscellaneous Orders			
	account the amount of Labor & Material			
	charged to Phonograph Experimental, Tool			
	& Attachment			
126	Miscellaneous Orders	5925.57		
145	Phonograph Experimental	176.95		
149	Tools	1,513.50		
147	Attachment	5925.42		
		28		
153	Sales		9604.85	
153	To Sales			9604.85
	Transferring to Miscellaneous Orders			
	account the amount of Sales are sold			
	to Phonograph Experimental Tools & Attachment			
71	Phonograph Experimental	294.86		
71	Tools	2962.09		
71	Attachment	6547.93		
26	Miscellaneous Orders	9604.85		
		28		
172	Individuals & Cos.		200	500
172	To Individuals & Cos.			
	To write off balance due same being			
	uncollectable			
41	Bates Accts Rec	200		
3	Bates Expenses	200		
41	Bates Accts Rec	200		
213	Remitt. Ruckert Stamp Co	200		

Orange N.J. February 1902

76	Manufacturing	21	1463.64	
176	Transferring amount of Labor & Material charged to Special Shop Order account to Miscellaneous Orders Account		1463.64	
126	Miscellaneous Orders	1463.64		
139	Special Shop Order 265	1463.64		
153	Sales	28		
153	To Sales	1019.29	1019.29	
	Transferring balance to credit of Special Shop Order account to credit of Miscellaneous Orders Account			
109	Special Shop Order 265	1019.29		
26	Miscellaneous Orders	1019.29		
167	General Expense	28		
31	To Furniture & Fixtures	6701	6701	
	Transferring amount of Labor & Material charged on Special Shop Order "to" to General Expense account			
112	Individuals & Co.	28		
167	To General Expense	876	876	
	Payment of Cash Account deducted in settlement of accounts during month of February 1902 as recorded in Cash Book 5 folios 51 to 63 both inclusive			
167	General Expense	28		
12	To Individuals & Co.	75.05	75.05	
	Payment of Rate, Interest & Discount allowed in settlement of accounts during month of February 1902 as recorded in Cash Book 25 folios 51 to 63 both inclusive			
14	Rate Acct. Rec.	75.05		

Orange N.J. February 1902

153	Sales	28		
121	To Individuals & Co.	117.02	117.02	
	27. Commission on Sales of Auto. Mural Macher & Bates Mch. for current month as recorded in Abstract of Sales			
14	Auto Mural Macher	1721.76	51	114.13
66	Bates Mch.	169.61	"	83.9
7	J. K. Bladstone			117.02
159	Machinery & Tools	28		
167	To General Expense	95.19	95.19	
	To transfer amount of Labor & Material charged to Spec Shop Order 573 from G.E. to M & S etc.			
139	Bond Interest	28		
156	To Unpaid Bond Interest	5000	5000	
	Payment of Bond Interest due on Coupon Series 29 remaining unclaimed and unpaid Feb 28 1902 and subject to demand			
	Amount of Series	7500.00		
	Paid	7450.00		
153	Individuals & Co.	28		
	To Sundries	1097.32.42		
	Payment of Sales for current month as recorded in Abstract of Sales folios 202 to 210 both inclusive to be credited as follows			
167	General Expense	756.02		
159	Machinery & Tools	404.01		
176	Manufacturing	5.00		
153	Sales	1094.00.40		
✓	Sundries	28		
176	To Manufacturing	1094.97		
	Amount of Material Transfers for month of February 1902 as recorded in Register of Material month folios 109 charged to			
167	General Expense	245.47		
159	Machinery & Tools	16.12		
31	Furniture & Fixtures	17		
176	Manufacturing	1142.151		

Orange N.J. February 1902

Dr	Individuals & Co	
Dr	To Individuals & Co	
	To write off summary debit and credit balances appearing in the following accounts on the Sales Accts. Ledger Feb'y 28-1901	
4	Sales Accts. Rec	672
3	Sales Expenses	672
46	Sales Accts. Rec	672
222	E. F. Brightwell	67
101	Jas. Ingles Jr.	25
205	G. C. Seeling	07
214	Weyen & Thakumar	11
211	Beuse & Darby	09
220	Oswald & Stuber	30
205	Gar. J. Tuttle	07
100	L. S. Watson	674
220	D. C. Sharp & Co.	03
205	Long Exchange Trust	15
211	Edison Submarine	20
203	Edison Co.	06
212	F. L. Brown	113
214	J. H. Brown	06
215	Malaga Machine Works	13
203	Edison Manufacturing Co.	25
209	Edison Co. Long	14
211	Edison Co.	30
220	Edison Co.	06
205	Edison Co.	08
200	Edison Co. Long	12

Dr	Individuals & Co	
Dr	To Individuals & Co	
	Amount of Disbursements for month of February 1902 as recorded in the Disbursement Journal and book inclusive chargeable to	
101	General Expense	
109	Manufacturing & Tools	14,136.58
20	Local Sales & Freightage	1,512.44
31	Insurance & Freightage	524.40
109	Manufacturing	0000
101	Individuals & Company	19,954.98
		2500

672

972

Orange N.J. February 1902

Dr	Individuals & Co	
Dr	To Individuals & Co	
	To transfer Invoice Feb'y 1901 Empire-Insulated Wire Co. from Edison Co. books to Edison books	114.65
106	Manufacturing	1109.3
106	Edison Works	1109.3
107	General Expense	375
210	Edison Manuf'g Co.	114.68
103	Sales	
106	To Manufacturing	525
	To transfer amount of Sales credited to Japanning from Sales Ledger to Manufacturing Ledger	525
61	Japanning	525
12	Japanning	525
107	Manufacturing	21
107	To General Expense	1,040,906
	To transfer Expense directly chargeable to Edison Works Insurance	1,040,906
27	Auto Numbering Machine	1,040,906
107	Manufacturing	38
107	To General Expense	7942.19
	To transfer amount standing to credit of Box Factory Account to credit of General Expense acct.	7942.19
101	Box Factory	7942.19
103	Sales	28
103	To Sales	49,236.0
	To transfer balance standing to credit of Scrap Account to credit of Phonograph & Scrap	49,236.0
102	Scrap	49,236.0
2	Phonograph	49,236.0

2602,975

Orange NJ February 1902

177	Manufacturing	28	397620	
176	To Manufacturing		397620	
	To distribute for ratio balance existing in Japaning Account			
121	Japaning	397620		
6	Photographs	179,566.39	3249.45	
126	Miscellaneous	14,301.65	208.10	
107	Spring Motor	11795.79	195.27	
106	Fan Motor	6216.02	123.34	
128	Deep microscope	2241.24	149.36	
		219,728.39	397620	
8	Prof's & Loss	28	4027560	
	To Securities			
	To write off the following accounts			
139	Bonds Interest		1500000	
165	Reserve funds		3827560	
8	Prof's & Loss	21	3003	
182	To Individuals & Co		3003	
	To transfer from Ratio Accts Acc Ledger into General Ledger the amount of Ratio Suspense for fiscal year ending Feb 28 1902			
162	Ratio Accts Acc	50.00		
1	Ratio Suspense	50.00		
189	Machinery & Tools	28	156182	
103	To Sales		156182	
	To transfer amount of Acc 33296 Feb 1902 credited to Mr F & Co to Miscellaneous Orders			
260	Miscellaneous Orders	156182		
108	Machinery & Tools	28	10895	
103	To Sales		10895	
	To transfer amount of Acc 33293 Feb 1902 credited to Mr F & Co to Miscellaneous Orders			
26	Miscellaneous Orders	10895		

Orange NJ February 1902

189	Machinery & Tools	28		67198
103	To Sales			67198
	To transfer amount of bill 23292 Feb 1902 credited to Mr F & Co to Miscellaneous Orders			
26	Miscellaneous Orders	67198		
189	Machinery & Tools	28		370136
103	To Sales			370136
	To transfer amount of bill 23250 Feb 1902 credited to Mr F & Co to Miscellaneous Orders			
26	Miscellaneous Orders	270126		
177	Manufacturing	21		6465
189	To Machinery & Tools			6465
	Transferring amount of Labor & Material charged against Spec Shop Order 191 from Mr F & Co into Miscellaneous Orders			
136	Miscellaneous Orders	6465		
177	Manufacturing	28		7699
189	To Machinery & Tools			7699
	To transfer amount of Labor & Material charged against Spec Shop Order 225 from Mr F & Co into Miscellaneous Orders			
126	Miscellaneous Orders	7699		
177	Manufacturing	28		31402
189	To Machinery & Tools			31402
	To transfer amount of Labor & Material charged against Spec Shop Order 225 during fiscal year ending Feb 28 1902 from Mr F & Co into Miscellaneous Orders			
126	Miscellaneous Orders	31402		
177	Manufacturing	21		11061
189	To Machinery & Tools			11061
	Transferring amount of Labor & Material charged against Spec Shop Order 234 from Mr F & Co to Miscellaneous Orders			
126	Miscellaneous Orders	81061		

Orange N.J. February 1902

77	Manufacturing	28	1145.56	
169	To Machinery & Tools		1145.56	
	To transfer amount of Labor & Material charged against Spec Shop Order #96 from M.F. Co into Miscellaneous Order #96			
172	Miscellaneous Order #96		1145.56	
167	General Expenses	28	657.53	
169	To Machinery & Tools		657.53	
	To correct errors in distribution of accounts as shown in Register of Disbursements during fiscal year ending Feb'y 28 1902 as per detail attached to vouchers			
167	General Expenses	28	35.16	
31	To Furniture & Fixtures		35.16	
	To correct errors in distribution of Accts Payable Vouchers			
	" 141.57 5.25 mfg			
	" 124.12 5700.00			
	" 154.39 106.1 Misc.			
153	Sales	28	230.00	
153	To Sales		230.00	
	To transfer amount credited to Material Sales by Journal entry Aug 28 1901 folio 40. to Miscellaneous Order #96			
36	Material Sales		230.00	
36	Miscellaneous Order #96		230.00	
8	Profit & Loss	28	2454.14	
167	To General Expenses		2454.14	
	To write off Legal Expenses amounting to \$46.61 also Expenses			
	incurred during fiscal year ending Feb'y 28 1902			

Orange N.J. February 1902

153	Individuals & Co	28	26494.64	
153	To Sales		26494.64	
	To charge National Phonograph Co with an amount sufficient to make profit on Phonographs equal 15%			
	Total Cash		262708.48	
	Less Inventory		42682.02	
			220026.46	
	15%		33000.20	
	Profit shown by Ledger		41705.26	
153	National Phon. Co		26494.64	
2	Phonograph		26494.64	
153	Sales	28	42980.72	
153	To Individuals & Co		42980.72	
	To credit National Phonograph Co with an amount sufficient to reduce Profit on Sale to Spring Motors Co to 15%			
	Wax			
	Spring Motors			
	Total Cash		194152.17	
	Less Inventory		29163.29	
			164988.88	
	15%		23137.59	
	Profit shown by Ledger		24292.72	
			41361.57	
8	Wax		1619.24	
114	Spring Motors		1619.24	
715	National Phon. Co		42980.72	
77	Manufacturing	28	166026.10	
167	To General Expenses		166026.10	
	To distribute parate General Expense & Depreciation over following accounts			
6	Phonograph		65976.76	
28	Cylinder & Turned Machines		16200.99	
143	Wax		44163.73	
126	Miscellaneous		6419.97	
107	Spring Motors		3766.62	
106	Iron Motors		2504.26	
128	Prof. Microscope		3000.59	
126	Cabinet		3381.74	
103	Edison Motors		5863.14	

Orange, N.J. February, 1902

153	Sales	28	599,255.83
171	To Manufacturing		599,255.83
To transfer cost of Sales of the following accounts for fiscal year ending July 25, 1902			
2	Photographs	254.669.39	6
14	Curtis Throat Machines	44.456.91	28
66	Dates Merchandise	1,418.76	116
8	Wax	1,542.49.28	143
26	Miscellaneous	21,912.45	126
104	Spring Motor	15,109.04	151
105	Fan Motor	10,187.05	106
38	Prof. Spectroscope	11,483.63	128
69	Cabinet	83,714.97	136
56	Raw Material Sales	1954.55	104
	28		

153	Sales	28	660,996.8
8	To Profit & Loss		660,996.8
For Profit realized on the following accounts during fiscal year ending July 25, 1902			
2	Photographs	58,200.40	
14	Curtis Throat Machines	18,295.42	
66	Dates Merchandise	13,485.96	
8	Wax	23,137.39	
26	Miscellaneous	7,142.16	
104	Spring Motor	22,66.35	
105	Fan Motor	6,007.5	
56	Raw Material Sales	634.93	
38	Prof. Spectroscope	7,96.15	
69	Cabinet	24,727.53	
	28		

167	General Expenses	28	24,524.14
8	To Profit & Loss		24,524.14
To cancel Journal entry made in error (see Feb 98) amount being included in pro rata distribution of General Expenses			

Orange N.J. March 1902

123 ³ Individuals & Cos.
¹²³ To Notes Payable
 Gave our Note dated March 3rd 1901 payable
 four months after date @ German Natl
 Bank Newark N.J. renewing Note dated
 12/30/1901 due this day.
 1 Samuel Insull 1000.00

123 ⁸ Individuals & Cos.
¹²³ To Sundries
 Accepted Draft this day dated Mar 8 1902
 at 3 and 4 months respectively payable
 at German National Bank Newark N.J.
 in settlement of account to Mar 1st 1902.
 Interest added @ 6% per annum.
 123 Ce. Notes Payable (3 Mos. Note)
 123 " " (4 " " ")
 9 Q. Weston & Sons 3779.05

123 ¹¹ Individuals & Cos.
¹²³ To Sundries
 Accepted two Draft this day dated Mar 11 1902
 payable three and four months after date
 respectively @ German National Bank
 Newark N.J. in settlement of account to
 Jan 1st 1902. Interest added from Mar 1st @
 6% per annum.
 123 Ce. Notes Payable (3 Mos. Note)
 123 " " (4 Mos. ")
 1 John Fols. Sons & Co. 2291.59

123 ¹² Individuals & Cos.
¹²³ To Sundries
 Accepted Draft this day dated Mar 12 1902 at
 3 and 4 months respectively payable @ German
 National Bank Newark N.J. in settlement
 of account to Jan 1st 1902. Interest added
 @ 6% per annum.
 123 Ce. Notes Payable (3 Mos. Note)
 123 " " (4 " " ")
 1 Bridgeport Brass Co. 3669.70

1000.00

1000.00

3779.05

2291.59

3669.70

1146.47

1152.12

1820.24

1839.96

Orange N.J. March 1902

123 ¹³ Individuals & Cos.
¹²³ To Individuals & Cos.
 Transferring from Dr. Cos. Ledger into Bates
 Acct. Rec. Ledger amount of Invoice #10-1902
 6 Stewart & Co. 13
 145 Bates Acct. Rec. 13
 76 Stewart & Co. 13

123 ²⁴ Individuals & Cos.
¹²³ To Individuals & Cos.
 To transfer amount paid Geo. Hill through
 Bates Cash this day from Dr. Cos. Ledger into
 Bates Acct. Rec. Ledger
 44 Bates Acct. Rec. 53
 216 Geo. Hill 53
 204 Geo. Hill 53

123 ³¹ General Expense
¹²³ To Individuals & Cos.
 Salary for current month
 19 Ross & Edison 1000.00

123 ³¹ Individuals & Cos.
¹²³ To Individuals & Cos.
 To write off amount in dispute as per
 instructions of Mr. Edmunds
 44 Bates Acct. Rec. 10.57
 3 Bates Suspense 10.57
 44 Bates Acct. Rec. 10.57
 3 Edmundson 10.57

123 ³¹ General Expense
¹²³ To Individuals & Cos.
 Amount of Cash Discount allowed in
 settlement of Bates Accounts Receivable
 during month of March 1902 as recorded
 in Cash Book 25 plus 64.56 both
 inclusive
 44 Bates Acct. Rec. 40.19

40.19

40.19

Orange NJ March 1902

147	General Expense	31	100.00
152	To Individuals & Co.	100.00	
To transfer amount of Bates Extra Expense for month of March 1902 from Bates Acct. Rec. Ledger into General Ledger			
148	Bates Acct. Rec.	100.00	
72	Bates Extra Expense	100.00	
147	General Expense	31	2.05
152	To Individuals & Co.	2.05	
To allow 2% Cash Disc. on Net purchases for February 1902 amounting to 102.44			
148	Bates Acct. Rec.	2.05	
1	National Photo Co. Foreign Disp.	2.05	
152	Individuals & Co.	31	65616.59
To Sundries			
Amount of Sales for month of March 1902 as recorded in Abstract of Sales folios 212 to 217 both inclusive to be credited as follows			
147	General Expense	104.24	
159	Machinery & Tools	299.55	
150	Sales	65213.12	
153	Sales	31	119.50
152	To Individuals & Co.	119.50	
3% Commission on Sales of Bates Meters & Anti Humbling Machine for March 1902 as recorded in Abstract of Sales folio 217. Also 7% amount of Repairs for month of February not included in Journal entry for that month.			
148	Bates Meter Machine (March)	5562.85	
	(Repair Feb)	149.69	
146	Bates Merchandise	5720.54	114.47
		251.34	50.3
7	J. H. Glendon	577.58	119.50
			119.50

Orange NJ March 1902

✓	Sundries	31	
152	To Individuals & Co.	61260.58	
Amount of Disbursements vouchers during month of March 1902 as recorded in Register of Disbursements folios 1 to 6 both inclusive. Chargeable to			
161	General Expense	13463.97	
159	Machinery & Tools	261.19	
177	Manufacturing	5256.74	
152	Individuals & Companies	16.48	
✓	Sundries	31	
177	To Manufacturing	16226.52	
Amount of Material Transfers for month of March 1902 as recorded in Register of Disbursements folio 7 chargeable to			
161	General Expense	3131.29	
159	Machinery & Tools	61.91	
177	Manufacturing	15026.55	

Orange NJ April 1902

150 Individuals & Cos
 153 To Notes Payable
 Accepted Draft this day payable 60 days
 at 5% date at German National Bank
 Newark NJ in settlement of account to
 Mar 1st 1902. Interest added as follows
 60 day interest on Jan. 9%
 36 Feb 7%
 100 Empire Insulated Wire Co 181877

150 Individuals & Cos
 153 To Individuals & Cos
 Transferring from P Co Ledger into Bates
 Accts Rec Ledger the following items deducted
 in settlement this day
 100 McFarce Co Int 7% 12% 3% 4.00
 6 Stewart Co 7% 12% 15% 26.46
 302 John Gladding Co. Home 7% paid due April 30
 45 Bates Accts Rec 29.96
 1 WA Force & Co 2.00
 716 Stewart Co 26.46
 210 John Gladding .50

150 Individuals & Cos
 153 To Individuals & Cos
 To write off amount standing to the debit of
 McFarce Trading Co not having this day accepted
 settlement @ 5% discount
 45 Bates Accts Rec 15.00
 5 Bates Shipman 15.00
 45 Bates Accts Rec 15.00
 100 NY & Java Trading Co 15.00

150 Individuals & Cos
 123 To Notes Payable
 Note dated this day payable Sept 1902 at German
 National Bank Newark NJ. Renewing Note
 dated 1230-1901 due this day.
 Note interest P. T. per annum
 1 Samuel Israel 2000.00

151177

29.96

1533

2000.00

2000.00

Orange NJ April 1902

168 General Expenses 3.0
 153 To Individuals & Cos
 To allow 2% Cash Discount on Net purchases
 during month of March 1902 362.21
 45 Bates Accts Rec 7.24
 1 National Phone Co. Foreign Dep. 7.24

150 Individuals & Cos
 153 To Individuals & Cos
 To credit Nat Phone Co with amount of
 Int 4% - Healy Co. same being applied
 in settlement of their account on National
 Phone Co books.
 102 Healy Co 25.67
 777 National Phone Co 25.67

150 Individuals & Cos
 153 To Individuals & Cos
 Transferring amount of Int 7% 1901 from
 P Co Ledger into Bates Accts Rec Ledger
 to balance account to date
 302 Photo-American Engraving Co 4.50
 45 Bates Accts Rec 4.50
 201 Geo Newcomb 4.50

168 General Expenses 3.0
 153 To Individuals & Cos
 Amount of Cash Discount allowed in
 settlement of Bates Accts Receivable during
 current month as recorded in Cash Book
 at folios 70 to 75 both inclusive
 45 Bates Accts Rec 61.03

150 General Expenses 3.0
 123 To Individuals & Cos
 Salary for current month
 47 Thos A Edison 1000.00

724

724

2567

2567

4.50

4.50

61.03

61.03

1000.00

1000.00

Orange, N.J. April 1902

161	General Expenses	30	100.00
172	To Individuals & Co.		100.00
	To transfer amount of Bates Extra Expenses for current month from Bates Accts Rec Ledger into General Ledger		
171	Bates Accts Rec	100.00	
72	Bates Extra Expenses	100.00	
161	General Expenses	30	
179	To Machinery & Tools		13.75
	To correct distribution of Account Payable Voucher 76115 the first four items on Jan 7-1902 - 11.95 being charged to Mchey & Tools in error		13.75
159	Machinery & Tools	30	299.53
153	To Sales		299.53
	To correct distribution of Bill 23741 To 1901 which was credited to Machinery & Tools instead of Miscellaneous Orders		
26	Co. Miscellaneous Orders	299.53	
177	Manufacturing	30	
159	To Machinery & Tools		262.15
	To transfer amount of Labor & Material charged against Spec Shop Order 496 from Mar 1st 1902 up to and including Apr 5 1902 from Mchey & Tools account into Miscellaneous Orders		262.15
26	Miscellaneous Orders	262.15	
172	Individuals & Co.	30	
	To Sundries		63741.03
	Amount of Sales for month of April 1902 as recorded in Abstract of Sales folios 219 to 225 both inclusive to be credited as follows		
161	General Expenses		153.25
153	Sales		63,637.50
177	Manufacturing		25

Orange, N.J. April 1902

153	Sales	30	119.51
183	To Individuals & Co.		119.51
21	Commission on Sales of Auto Running Machines. Bates Motor for month of April 1902 as recorded in Abstract of Sales folio 225 less amounts credited off to Suspense account during March & April 1902		
6	Bates Motor	297.91.24	116
14	Auto Running Mchcs.	279.24.7	
	less Suspense (Exemption)	1007	
	" (75) Jan 1 to 4 1902	2520	100.57
		297.54.9	119.51
7	J. H. Gladstone	30	119.51
	Sundries		
153	To Individuals & Co.		719.50.50
	Amount of Disbursements vouchered during month of April 1902 as recorded in Register of Disbursements folios 8 to 14 both inclusive chargeable to		
161	General Expenses		11642.81
179	Machinery & Tools		16.3.87
31	Furniture & Fixtures		17.20
177	Manufacturing		6060.921
153	Individuals & Companies		162.9
	Sundries	30	
177	To Manufacturing		17767.41
	Amount of Material Transfers for month of April 1902 as recorded in Register of Disbursements folio 14 chargeable to		
161	General Expenses		5378.96
177	Manufacturing		15328.45

Orange N.J. May 1902

183	Individuals & Co.	12	620
113	To Individuals & Co.	620	
Transferring from Dr. Co. Ledger into Bates Accts Rec. Ledger the following monies deducted in settlement this day: 4/10 20 4/10 25 4/10 25 4/10 25 4/10 25			
6	Stewart & Co.	620	
4/10	Bates Accts Rec.	620	
3/6	Stewart & Co.	620	
183	Individuals & Co.	19	
123	To Notes Payable		
Accepted Drafts this day payable 30 days after date at German National Bank, Newark NJ in settlement of account to May 1st.			
5	American Oil & Supply Co.	844.22	
140	Dividend	20	
183	To Individuals & Co.		
For a dividend of 1/2 per share on all stock of the Company entitled thereto as per resolution of the Board of Directors at a special meeting held at the Catering Met Orange N.J. May 2-1902. Dividend 1011			
101	W.B. Hutchinson	312.50	
102	Chas. Patterson	310.55	
100	Wm. Sheriff Edison	37.50	
106	John A. Edison	2590.26	
102	Walter Cutting	396.25	
102	Jas. B. W. Cutting	565.92	
8	W.C. Kilmore	6.25	
1000	National Phonograph Co.	1757.50	
1	Samuel Insull	6.25	
100	J. M. Cheney	6.25	
100	J. F. Randolph	12.50	
100	J. E. Seaver	6.25	

Orange N.J. May 1902

183	Individuals & Co.	27	2.5
183	To Individuals & Co.	2.5	
To credit account of Jackson Stationery Co week amount of our Credit - 33071. 10.1901 which was written off to suspense 3284.912			
4/10	Bates Accts Rec.	25	
3	Bates Shippen	25	
4/10	Bates Accts Rec.	25	
203	Jackson Stationery Co.	25	
183	Individuals & Co.	27	2.5
182	To Individuals & Co.	2.5	
To transfer from Dr. Co. Ledger into Bates Accts Rec. Ledger amount of our Bates Credit 33071. 10.1901. paid through Petty Cash this day			
4/10	Bates Accts Rec.	25	
203	Jackson Stationery Co.	25	
200	Jackson Stationery Co.	25	
183	Individuals & Co.	21	16640.75
183	To Individuals & Co.	16640.75	
To transfer balance standing to credit of T.A. Edison to account of National Phon Co			
1/10	Thos. A. Edison	16640.75	
2	National Phonograph Co.	16640.75	
168	General Expenses	31	145
31	To Furniture & Fixtures	145	
To correct distribution of Accounts Payable Voucher - 17054. changed to Fr. Fr. error			
168	General Expenses	393	393
163	To Individuals & Co.	393	
To allow 24 Cash Discount on Net purchases for April, which amount to 196.52			
4/10	Bates Accts Rec.	393	
1	National Phon Co. Foreign Rept.	393	

Orange N.J. May 1902

183	Individuals & Co	29	1070.00
	To Sundries		
	Am this May two Notes payable three and four months, after date respectively @ Boston National Bank Newark N.J. in settlement of account on file to May 1st. Interest added @ 6% per annum		
123	Notes Payable	3 mos	2670.00
123	"	"	2040.00
9	Heaton & Son	4070.00	
161	General Expense	31	1000.00
183	To Individuals & Co		1000.00
140	To cover salary for current month	1000.00	
140	Phos & Edison		
161	General Expense	31	125.00
183	To Individuals & Co		125.00
	Transferring amount of Bates Extra Expense for current month from Bates Acct Rec Ledger into General Ledger		
140	Bates Acct Rec	125.00	
140	Bates Extra Expense	125.00	
183	Individuals & Co	31	140.00
183	To Individuals & Co		140.00
	To write off amount of Bates Recd. 56619 309-1902 as per instructions of Mr. Edmund Groves bel in transit		
140	Bates Acct Rec	140.00	
3	Bates Suspense	140.00	
140	Bates Acct Rec	140.00	
140	Wilson Humphrey & Co	14.00	
183	Individuals & Co	31	3.00
183	To Individuals & Co		3.00
	Transfer to apply amount of Nealy & Co. due against their account on Natl Phone Co. books		
112	Nealy & Co	3.00	
2	Malboro Phonograph Co	3.00	

Orange N.J. May 1902

163	General Expense	31	79.01
183	To Individuals & Co		79.01
	Amount of Bates Interest & Discount allowed in settlement of accounts during current month as recorded in Cash Book 75 folios 76-71 both inclusive		
140	Bates Acct Receivable	79.01	
183	Individuals & Co	31	5530.55
	To Sundries		
	Amount of Sales for current month as recorded in Abstract of Sales folios 237 to 232 both inclusive to be credited as follows		
166	General Expense		553.31
163	Sales		5484.24
183	Individuals & Co	31	879.
166	To General Expense		879.
	Amount of Cash Discount deducted in settlement of Trade Invoices during May as recorded in Cash Book 5 folios 81		
	To Sundries		
183	To Individuals & Co		61254.89
	Amount of Disbursements vouchers during month of May 1902 as recorded in Register of Disbursements folios 16 to 21 both inclusive Chargeable to		
168	General Expense		2976.65
181	Machinery & Tools		968.89
177	Manufacturing		47676.30
183	Individuals & Companies		39.05
	To Sundries		
177	To Manufacturing		15464.30
	Amount of Material Transfers for month of May 1902 as recorded in Register of Disbursements folios 21 Chargeable to		
168	General Expense		2725.96
181	Machinery & Tools		127
177	Manufacturing		12677.07

Orange, N.J. June, 1902.

153	Individuals & Co.	1020.00	
123	To Note Payable		1020.00
Gave this day one Note payable 12 months after date at German National Bank Newark in settlement of account to Apr int. Interest added @ 6% per annum			
1	John Teller Smith & Co.	1020.00	
113	Individuals & Co.	2035.00	
123	To Sundries		
Gave this day two Notes payable three & four months after date respectively at German National Bank Newark N.J. applying on account. Interest added @ 6% per annum			
123	Note Payable 3 mos.	1015.00	
123	" 4 "	1020.00	
1	Bridgeport Brass Co.	2035.00	
56	Notes Receivable		2969
113	To Individuals & Co.		2969
Received this day Note at one month payable at Merchants National Bank New Haven Conn in settlement of account to June 1st 1902			
4	Bates Accts Rec	2969	
1	Valentine Stamp Mks.	2969	
56	Notes Receivable		2000.00
113	To Individuals & Co.		2000.00
Received this day Note at four months payable at German National Bank Newark to apply on account			
71	National Photographic Co.	2000.00	
113	Individuals & Co.		3617
113	To Individuals & Co.		3617
Transferring amount of Nealy & Co invoice from lat. against their account in Natl Photo Co. book.			
113	Nealy & Co.	3617	
71	National Photographic Co.	3617	

Orange, N.J. June, 1902

117	Manufacturing	30	
168	To General Expense		124.96
To correct entry in Register of Disbursement of Voucher 1702 which was distributed to Co. instead of Material			
153	Raw Material	124.96	
113	Individuals & Co.		157
113	To Individuals & Co.		157
Transfer to balance account			
4	Bates Accts Rec	157	
4	J.H. Thomson	117	
206	Northern Central RR Co.	70	
4	Bates Account Rec	157	
206	Nela & Co. & Western RR Co.	117	
213	N.C. French	70	
168	General Expense	30	
113	To Individuals & Co.		100.00
Transferring amount of Bates Extra Expense for current month from Bates Accts Rec			
4	Ledger into General Ledger		
4	Bates Accts Rec	100.00	
2	Bates Extra Expense	100.00	
153	Individuals & Co.		2052.50
113	To Sundries		
Gave this day two Notes payable three & four months after date respectively at Union National Bank Newark N.J. Interest added @ 6% per annum			
123	Co. Notes Payable (3 mos. Note)		1523.50
123	" 4 "		1529.00
1	Bridgeport Brass Co.	2052.50	
113	Individuals & Co.		396
113	To Individuals & Co.		396
To allow J.H. Cash Disbursement on Natl purchase for month of May 1902			
4	Bates Accts Rec	396	
1	Natl Photo Co. Fring. Exp.	396	

Orange N.J. June 1902

56 Notes Receivable	2000.00	
183 To Individuals & Co.		2000.00
Received this day Note at four months payable to Union National Bank Newark N.J. on account to apply on account		
77 National Phonograph Co.	2000.00	
161 General Expense		44.68
183 To Individuals & Co.		44.68
Amount of Cash Discount allowed in settlement of accounts during month of June 1902 as recorded in Cash Book 5 folios 52 to 56 both inclusive		
46 Notes Acct Rec	44.68	
183 Individuals & Co.		49,052.30
To Sundries		
Amount of Sales for month of June 1902 as recorded in Abstract Sales folios 536 to 540 both inclusive to be credited to		
161 General Expense	64.50	
153 Sales	49,117.10	
✓ Sundries		3.0
183 To Individuals & Co.		47,240.72
Amount of Disbursement vouchers during month of June 1902 as recorded in Register of Disbursement folios 23 to 29 both inclusive chargeable to		
161 General Expense	1,112.50	
184 Machinery & Tools	674.48	
177 Manufacturing	2651.02	
183 Individuals & Co.	30.90	
✓ Sundries		3.0
177 To Manufacturing		1,226.10
Amount of Material Transfers for month of June 1902 as recorded in Register of Disbursement folios 29 chargeable to		
161 General Expense	2803.93	
184 Machinery & Tools	231.0	
177 Manufacturing	9434.03	

Orange N.J. July 1902

183 Individuals & Co.		1224.00
123 To Notes Payable		1224.00
Gave this day our Note payable 4 months after date to Union National Bank Newark N.J. on settlement of account to May 1st Interest added @ 6% per annum		
1 John Toler Sons & Co.	1224.00	
183 Individuals & Co.		1000.00
123 To Notes Payable		1000.00
Gave this day our Note payable 4 months after date to Union National Bank Newark N.J. renewing note of like amount due this day with interest @ 5% per annum		
1 Samuel Insull	1000.00	
56 Notes Receivable		1572.98
183 To Individuals & Co.		1572.98
Received this day Note at 4 months on settlement of Jan 1901-01-01 Interest added @ 6% per annum		
5 Edison Portland Cement Co.	1572.98	
183 Individuals & Co.		1075.03
123 To Notes Payable		1075.03
Accepted Draft this day @ 30 days sight payable to Union National Bank Newark N.J. settlement of America dated June 30, 1902		
5 American Oil Supply Co.	1075.03	
161 General Expense		4.58
183 To Individuals & Co.		4.58
To allow 2% Cash Discount on Net purchases for month of June 1902		
Debit	220.29	
Credit	15.0	
Net purchases	229.09	
46 Notes Acct Rec	4.58	
1 National Photo Co. Foreign Dept.	4.58	

Orange N.J. July 31-1902

161	General Expense	31	
183	To Individuals & Cos		100.00
	Transferring amount of Bates Extra Expense for month of July 1902 from Bates Acct. Per Ledger into General Ledger		
445	Bates Acct. Receivable	100.00	
77	Bates Extra Expense	100.00	
183	Individuals & Cos	31	
183	To Individuals & Cos		48
	Transferring from S. Lee Ledger into Bates Acct. Per Ledger amount of interest for 1st. Stewart & Co.	48	
445	Bates Acct. Rec.	48	
77	Stewart & Co.	48	
183	Individuals & Cos	31	
183	To Individuals & Cos		239
	Transferring from S. Lee Ledger into Bates Acct. Per Ledger the following items paid through City Cash during current month.		
445	Bates Acct. Rec.	239	
224	C. H. Barden	65	
3	Geo. H. Hewitt	90	
107	Weldon Brown	84	
262	C. H. Barden	65	
261	Geo. H. Hewitt	90	
265	Weldon Brown	84	
183	Individuals & Cos	31	
56	To Notes Receivable		2969
	To cancel Journal entry of June 5-1902 same being made in error		
445	Bates Acct. Rec.	2969	
1	Valentine Stamp Co.	2969	

Orange N.J. July 1902

183	Individuals & Cos	31	
183	Individuals & Cos		2969
	Received June 5th 1902. Note at one month payable to Merchant, National Bank New Haven Conn in settlement of account to June 1-1902.		2969
445	Bates Acct. Rec.	2969	
161	Bates Note Receivable	2969	
445	Bates Acct. Rec.	2969	
1	Valentine Stamp Co.	2969	
183	Individuals & Cos	31	
161	To General Expense		06
	Amount of Interest added to Note of Valentine Stamp Co. paid July 12-1902		06
445	Bates Acct. Rec.	06	
161	Bates Note Receivable	06	
183	Individuals & Cos	31	
118	To General Expense		300
	To correct error in distribution of Petty Cash Voucher 77752		300
101	W. J. Smith Supply Co.	300	
183	Individuals & Cos	31	
161	To General Expense		677
	Amount of Cash Discount deducted in settlement of account for month of July as recorded in Cash Book & plus 77572 both inclusive.		677
161	General Expense	31	
183	To Individuals & Cos		5922
	Amount of Cash Discount allowed on settlement of account for month of July 1902 as recorded in Cash Book & plus 77572 both inclusive.		5922
445	Bates Acct. Rec.	5922	

Orange N.J. July 1902

113	Individuals & Co.	54108.64
✓	To Sundries	
	Amount of Sales for month of July 1902 as recorded in Abstract of Sales folios 245 to 253 both inclusive to be credited as follows:	
168	General Expenses	226.20
103	Sales	53882.44
✓	Sundries	
113	To Individuals & Co.	60157.45
	Amount of Disbursements for month of July as recorded in Register of Disbursements folios 215 to 27 both inclusive chargeable to	
168	General Expenses	16392.89
119	Machinery & Tools	25027.5
31	Furniture & Fixtures	35.00
177	Manufacturing	22214.27
103	Individuals & Companies	1256.
✓	Sundries	
177	To Manufacturing	12429.45
	Amount of Material Transfers for month of July 1902 as recorded in Register of Disbursements folios 27 chargeable to	
168	General Expenses	2999.27
177	Manufacturing	12420.68
✓	General Expenses	
168	General Expenses	3500.
31	To Furniture & Fixtures	3500.
	Transferring amount of Accs. Payable Voucher 18085 from P & T Co. to S & C Co.	

Orange N.J. August 1902

113	Individuals & Co.	300.	200.
113	To Individuals & Co.		
	Transferring from P & T Co. Ledger into Sales Accts. Rec. Ledger amount of \$200 June 21th deposited in settlement this day		
2	W.A. Force & Co.	200.	
45	Notes Accts. Rec.	200.	
14	W.A. Force & Co.	200.	
103	Individuals & Co.	1063.21	1063.21
123	Notes Payable		
	Gave this day our Note at 3 months payable to Union National Bank Newark N.J. Interest added @ 6% per annum Balance of payment on 3 months		
71	Brown & Sharpe Mfg Co.	1063.21	
103	Dividend	6018.00	6018.00
103	To Individuals & Co.		
	For a dividend of 12 1/2 per share on all stock of the Company entitled thereto payable Aug 20 1902 as per resolution of Board of Directors held at Edison Laboratory this day		
102	Chas. Ditzel	228.44	310.55
100	Wm. A. Edison	50.	57.50
101	H.B. Auchincloss	250.	312.50
1	Samuel Insull	5.	6.25
100	Patent Telephone Co.	1430.	1787.50
1	Wm. A. Edison	2572.21	2590.26
100	J.F. Randolph	10.	12.50
6	W.C. Gilmore	5.	6.25
102	J.C. Charles	5.	6.25
100	J.M. Chesney	5.	6.25
102	J.W. Cutting	1136.75	545.94
102	Walter Cutting	237.	396.25
		44514.40	6018.00

Orange, N.J. August 1902

169	General Expense	30	206.00	
171	To Manufacturing		206.00	
	To correct distribution of Material Transfer Truck 7109, above amount being charged to Material Sales in error.			
100	New Material Sales	206.00		
183	Individuals & Co.	30		
173	To Individuals & Co.		49	
	Transferring Inv to firm & Co. Ledger into Bates Accts Rec Ledger			
172	To Bates Accts Rec	49		
175	Bates Accts Rec	49		
173	To Bates Accts Rec	49		
183	Individuals & Co.	30		
173	To Individuals & Co.		21.17	
	Received this day Note payable one month after date to Merchants National Bank New Haven Conn. in settlement of account to 1/2 20% interest added.			
175	Bates Accts Rec	21.17		
101	Bates Notes Receivable	21.17		
175	Bates Accts Rec	21.17		
1	Valentine Stamp Co	21.17		
183	Individuals & Co.	30		
169	To General Expense		20	
	Interest added to Note Valentine Stamp Co dated 7/1/1902			
175	Bates Accts Rec	20		
1	Valentine Stamp Co	20		
183	Individuals & Co.	30		
173	To Individuals & Co.		6.67	
	To write off balance due same being uncollectable			
175	Bates Accts Rec	6.67		
175	Bates Suspense	6.67		
175	Bates Accts Rec	6.67		
212	American Typewriter Exchange	6.67		

Orange, N.J. August 1902

169	General Expense	30		
183	Individuals & Co.	281		281
	To allow 2% Cash Discount on Net purchases for July 1902			
	Gross purchases	141.12		
	Credits	70		
	Net purchases	141.042		
175	Bates Accts Rec	2.81		
175	To National Phone Co. Foreign Dept	2.81		
183	Individuals & Co.	30		
173	To Individuals & Co.		60	60
	Transferring amount refunded by Eng Office Aug 19, 1902 from S & Co. Ledger into Bates Accts Rec Ledger			
175	Bates Accts Rec	60		
203	W. Enginerring Office	60		
204	W. Enginerring Office	60		
169	General Expense	30		
173	To Individuals & Co.		125.00	125.00
	Transferring amount of Bates Extra Expense for month of August 1902 from Bates Accts Rec Ledger into General Ledger			
175	Bates Accts Rec	125.00		
175	Bates Extra Expense	125.00		
183	Individuals & Co.	30		
169	To General Expense		320	
	Amount of Cash Discount deducted in settlement of accounts during August as recorded in Cash Book 5 folios 92 to 96			
169	General Expense	30		
173	To Individuals & Co.		30.96	30.96
	Amount of Cash Discount allowed in settlement of accounts during August as recorded in Cash Book 5 folios 92 to 96 inclusive			
175	Bates Accts Rec	30.96		

Orange N.J. August 1902.

154	Individuals & Co.	30	10,835.28
✓	To Sundries		
	Amount of Sales for month of August 1902 as recorded in Abstract of Sales folios 354 to 361 both inclusive to be credited as follows		
169	General Expense	13.327	
177	Manufacturing	624	
153	Sales	1,082.1457	
✓	Sundries	30	
154	To Individuals & Co.	7,478.40	
	Amount of Advances rendered during August 1902 as recorded in Register of Advances folios 39 to 45 both inclusive chargeable to		
169	General Expense	152.69 41	
179	Machinery & Tools	13,327.00	
177	Manufacturing	66,207.89	
154	Individuals & Companies	34.54	
✓	Sundries	30	
177	To Manufacturing	1,528.140	
	Amount of Materials transferred for month of August 1902 as recorded in Register of Advancements folios 45 chargeable to		
169	General Expense	252.692	
177	Manufacturing	127,444.48	
159	Don & Interest	30	
156	To Payroll Bond Interest	252.500	
	Amount due on Coupon Series "10 but unclaimed and unpaid Aug 1902 and subject to demand		
	Amount Series 7000.00		
	paid 5975.00		

Orange N.J. September 1902.

154	Individuals & Co.	2	1000.00	1000.00
123	To Notes Payable			
	Issue this day our Note @ 10 months payable Jan 2, 1903 @ Union National Bank Newark in part renewal of our Note dated Apr 28 1902 due this day without interest @ 10 per annum			
1	Samuel Bristol	1000.00		
154	Individuals & Co.	1	1872	1872
154	To Individuals & Co.			
	Transferring amount of Cash credited to account of Community Mfg Co Aug 6-1902 to account of P. A. Wilson			
4	Bates Accts Rec	1872		
100	Community Mfg Co	1872		
4	Bates Accts Rec	1872		
217	P. A. Wilson	1872		
169	General Expense	13	57	57
154	To Individuals & Co.			
	To allow 2% Cash Discount on following accounts not deducted at time of settlement			
4	Bates Accts Rec	51		
210	Freight	13		
217	P. A. Wilson	38		
154	Individuals & Co.	13	48	48
154	To Individuals & Co.			
	Transferring amount of invoice 74 from Dr. C. C. Ledger into Sales Accts Rec Ledger			
100	Tower Mfg & Novelty Co	48		
45	Bates Accts Rec	48		
217	Tower Mfg & Novelty Co	48		
154	Individuals & Co.	19	1000.00	1000.00
123	To Notes Payable			
	Accepted Draft this day payable 30 days after date @ Union National Bank Newark in settlement of account to Sept 24, 1902 without interest			
5	American Oil & Supply Co	1000.00		

Orange, N.J. September, 1902

184 Individuals & Co.

To Individuals & Co.

Transferring amount paid through Petty Cash from N.C. Ledger into Bates Accts Rec. Ledger

4 Bates Accts Rec. 34.00

101 N.C. Miller & Co. 34.00

204 N.C. Miller & Co. 34.00

184 Individuals & Co.

To Individuals & Co.

Transfer to correct error in posting bill

2596 - 9/15/1902

4 Bates Accts Rec. 3.50

217 N.C. Horn Bros. 3.50

4 Bates Accts Rec. 3.50

217 N.C. Horn Bros. Co. 3.50

169 General Expense 30

184 Individuals & Co.

To Individuals & Co.

To allow 2% Cash Discount on Net-purchases for month of August 1902 not previously deducted

Gross purchases 197.22

Credits 10.82

Net-purchases 186.40

4 Bates Accts Rec. 3.73

1 National Phone Co Foreign Dept. 3.73

30

184 Individuals & Co.

To Individuals & Co.

Transferring amount of Service 9/15/02 from N.C. Ledger into Bates Accts Rec. Ledger

12 S.D. Buck Mfg Co. 55.00

4 Bates Accts Rec. 55.00

1 S.D. Buck Mfg Co. 55.00

Orange, N.J. September, 1902

184 Individuals & Co.

To Individuals & Co.

Transferring amount paid through Petty Cash Sept. 16-1902 from N.C. Ledger into Bates Accts Rec. Ledger

4 Bates Accts Rec. 60.00

101 Michert & Gardner 60.00

205 Michert & Gardner 60.00

169 General Expense 30

184 Individuals & Co.

To Individuals & Co.

Transferring amount of Bates Extra Expense for month of September 1902 from Bates Accts Rec. Ledger into General Ledger

4 Bates Accts Rec. 100.00

2 Bates Extra Expense 30 100.00

169 General Expense

184 Individuals & Co.

To Individuals & Co.

Amount of Cash Discount allowed in settlement of accounts during Sept. 1902 as recorded in Cash Book 3 folios 99.5

184 Individuals & Co. 99.50

4 Bates Accts Rec. 62.68

184 Individuals & Co.

To Sundries

Amount of Sales for month of September 1902 as recorded in Abstract of Sales folio 266 to 273 both inclusive to be credited to

169 General Expense 271.80

184 Sales 165.33

Orange N.J. September 1902

20	
✓ Sundries	
188 To Individuals & Cos	71423.42
Amount of Reimbursement vouchers during month of September 1902 as recorded in Register of Reimbursements folio 47 to 53, both inclusive chargeable to:	
189 General Expense	15360.96
189 Machinery & Tools	275.00
177 Manufacturing	53757.11
188 Individuals & Companies	29.55
30	
✓ Sundries	
177 To Manufacturing	21276.96
Amount of Material Transfers during month of September 1902 as recorded in Register of Reimbursements folio 53 chargeable to:	
189 General Expense	48422.6
177 Manufacturing	16434.70

Orange N.J. October 1902

Y	
189 Individuals & Cos	310
310	
189 To Individuals & Cos	310
Transferring amount of Attorney fees in collecting balance due from Stirling Craggy & Co. from Dr. Cash & Co. int. Date Accts. Receivable	
100 Associated Merchants of N.Y.	3.10
445 Date Accts. Rec.	31.0
225 Stirling Craggy & Co.	31.0
10	
56 Notes Receivable	1500.00
310	
189 To Individuals & Cos	1500.00
Received this day Note at 6 months payable at Union National Bank Newark N.J. to apply on account:	
296 National Phonograph Co.	1500.00
32	
189 Individuals & Cos	1668
32	
189 To Individuals & Cos	1668
Transferring amount paid through City Cash this day from Natl Phone Co. books to Edison Phone Works books.	
102 Mealey & Co.	16.68
796 National Phonograph Co.	16.68
22	
177 Manufacturing	805
22	
169 To General Expense	805
To correct distribution of Account Payable Voucher #216 Sept. 1902 charged to General Expense in error.	
166 Raw Material	8.05
22	
56 Notes Receivable	1700.00
22	
189 To Individuals & Cos	1700.00
Received this day Note payable at Franklin National Bank Phila. Pa. City \$1700.00 reversing note due Oct 20 1902.	
5 Edison Portland Cement Co.	1700.00

Orange NJ, October, 1902.

56	Notes Receivable	23	150.00	
185	To Individuals & Co.		150.00	
	Received this day Note at four months payable at Union National Bank, Newark NJ applying on account			
70	National Photographic Co.	1500.00		
20				
188	Individuals & Co.	146.7		
189	To Individuals & Co.		146.7	
	Transfer to correct error in entering B&W 2581 in Abstract of Sales Sept 30-1902.			
5	Edison Portland Cement Co.	146.7		
71	Edison Mfg Co.	146.7		
26				
169	General Expenses	312		
184	To Individuals & Co.		312	
	To allow 2% Cash Discount on Net purchases during September 1902 amounting to 153.17			
45	Bates Accts Rec.	312		
1	National Photo Co. Foreign Dept	312		
30				
184	Individuals & Co.	271		
185	To Individuals & Co.		271	
	Transferring from W Co Ledger into Bates Accts Rec. Ledger the following items.			
12	J D Bush Mfg Co.	98		
2	W A Force Co.	150		
100	Tower Mfg & Moly Co.	30		
44	Bates Accts Rec.	276		
13	J D Bush Mfg Co.	98		
1	W A Force Co.	150		
70	Tower Mfg & Moly Co.	30		
30				
169	General Expenses	125.00		
184	To Individuals & Co.		125.00	
	Transferring amount of Bates Extra Expenses for month of October 1902 from Bates Accts Rec. Ledger into General Ledger			
45	Bates Accts. Rec.	125.00		
14	Bates Extra Expenses	125.00		

Orange NJ, October, 1902.

188	Individuals & Co.	31		
189	To Individuals & Co.		18.14	
	Transferring from B Co Ledger into Bates Accts Rec. Ledger the following items		18.14	
20	Orange Mfg Co.	11.55	17.11	
100	Tower Mfg & Moly Co.	96		
44	Bates Accts Rec.	18.14		
1	Orange Mfg Co.	17.11		
70	Tower Mfg & Moly Co.	96		
31				
169	General Expenses		66.05	
184	To Individuals & Co.		66.05	
	Amount of Cash Discount allowed on settlement of Bates Accts Receivable during month of October 1902 as recorded in Cash Book			
45	Bates Accts Rec.	66.05		
31				
188	Individuals & Co.		1004.76.78	
189	To Sundries			
	Amount of Sales for month of October 1902 as recorded in Abstract of Sales, plus 277 to 284 both inclusive to be credited as follows			
169	General Expenses		2579.1	
184	Sales		100220.27	
77	Manufacturing		50	
31				
188	Sundries		696.39.58	
189	To Individuals & Co.			
	Amount of Disbursements recorded during month of October 1902 as recorded in Register of Disbursements, plus 55 to 61 both inclusive chargeable to			
169	General Expenses		1664.97	
189	Machinery & Tools		95.28	
177	Manufacturing		51.99.55	
188	Individuals & Companies		24.15	

Orange N.J. October 1902

✓	Shunders	31	
177	To Manufacturing	227.09.28	
	Amount of Material Transfers during month of October 1902 as recorded in Register of Disbursements folio 62 charged to		
169	General Expense	37.45.21	
177	Manufacturing	1726.4.07	

Orange N.J. November 1902

164	Individuals & Co.	5	
173	To Sales	7.65	7.65
	To change Water Numbering Machine Co with amount of Commission due us on machines sold to R.A. Childs Columbia S.C. by these parties		
46	Bates Accts Rec	7.65	
21	Water Numbering Machine Co	7.65	
66	Bates Mdr	7.65	
114	Individuals & Co.	7	
154	To Individuals & Co.	87	87
	To write off 50% of balance due same being uncollectable		
46	Bates Accts Rec	87	
5	Bates Suspense	87	
46	Bates Accts Rec	87	
200	C.W. Varney & Co.	87	
114	Individuals & Co.	15	
110	To Individuals & Co.	20.35	20.35
	Received this day Note at one month payable at Merchants National Bank New Haven Conn. in settlement of account to Nov 1st		
46	Bates Accts Rec	20.35	
101	Bates Note Rec	20.35	
46	Bates Accts Rec	20.35	
1	Valentine Stamp Co.	20.35	
114	Individuals & Co.	15	
169	To General Expense	11	11
	Interest added to Note of even date		
46	Bates Accts Rec	11	
1	Valentine Stamp Co.	11	

Orange N.J. November 1902

114	Individuals & Co	3	1000.00	
123	To Notes Payable		1000.00	
	Draw this day our Note payable Mar 3-1902 at Union National Bank Newark N.J. renewing our Note of July 3-1902 due this day with interest @ 5% per annum			
1	Samuel Insull	1000.00		
165	Dividends	30	601.800	
165	To Individuals & Co		601.800	
	For a dividend of $\frac{1}{2}$ per share on all stock of the Company entitled thereto declared payable on Nov 26 1902 as per resolution of the Board of Directors at a special meeting held at the Edison Laboratory West Orange N.J. Nov 17-1902			
100	Chas. Batschelor	248.14		579.50
100	M ^{rs} Thos A. Edison	30		57.50
101	A.B. Psychometric	350		312.50
1	Samuel Insull	5		6.25
100	International Graphophone Co	1717.50		
110	Thos A. Edison	2072.21		2590.26
100	John J. Randolph	10		12.50
8	W.C. Gilmore	5		6.25
100	John C. Pearson	5		6.25
100	J. M. Chesney	5		6.25
100	Walter Cuthing	317		394.25
100	John W. Harding	446.75		545.74
		4814.40		6018.00
169	General Expense	29	100.00	
169	To Individuals & Co		100.00	
	To transfer amount of Rates Extra Expense for month of November from Rates Accts Rec Ledger into General Ledger			
116	Rates Accts Rec	100.00		
172	Rates Extra Expense	100.00		

Orange N.J. November 1902

114	Individuals & Co	29		
169	To General Expense		588	588
	Amount of Cash Discount deducted in settlement of Accounts Payable during month of November as recorded in Cash Recd. 5 folios 111 to 117 both inclusive			
169	General Expense	29	657.7	
169	To Individuals & Co		657.7	
	Amount of Cash Discount allowed in settlement of Rates Accounts within ten days as recorded in Cash Recd. 5 folios 111 to 117 both inclusive			
116	Rates Accts Rec	657.7		
169	Individuals & Co	29	92995.16	
	To Sundries			
	Amount of Sales for month of November 1902 as recorded in Abstract of Sales folios 281 to 294 both inclusive to be credited to			
169	General Expense		250.53	
169	Sales		93742.73	
171	Manufacturing		60	
169	Sundries	29		
169	To Individuals & Co		77280.65	
	Amount of Disbursements vouchers during month of November 1902 as recorded in Register of Disbursements folios 63 to 69 both inclusive chargeable to			
169	General Expense		18263.61	
169	Machinery & Tools		278.50	
26	Real Estate & Buildings		1922	
171	Manufacturing		61291.61	
169	Individuals & Companies		31.91	

Orange N.J. November 1902

176 Sundries 29
 To Manufacturing
 Amount of Material Transfers for month
 November 1902 as recorded in Register
 of Disbursement folio 69 chargeable to
 169 General Expense
 177 Manufacturing

574.406
 1564.382

20667.88

Orange N.J. December 1902

184 Individuals & Co. 26
 184 To Individuals & Co.
 To transfer amount of Accounts Payable
 Vouchers # 159, Oct. 1902 & # 223 Nov. 1902
 from account of A. H. Lorton to account of
 F. D. Lorton
 102 A. H. Lorton 13.52
 103 F. D. Lorton 13.52

13.52

13.52

184 Individuals & Co. 26
 184 To Individuals & Co.
 Transfer to correct error in posting Cash
 item Oct. 21-1902
 102 F. D. Lorton 14.20
 103 A. H. Lorton 14.20

14.20

14.20

64 Allowance for Depreciation 31
 26 To Real Estate Buildings
 To write off the cost of Building "6" which
 has been torn down

462.00

462.00

184 Individuals & Co. 31
 184 To Individuals & Co.
 Transferring amount paid through City
 Cash on account of American Type
 Foundry Co's duplicate payment from
 Bates Ledger into Bates Accts Rec Ledger
 446 Bates Accts Rec 8.00
 10 American Type Foundry Co 8.00
 203 American Type Foundry Co 8.00

8.00

8.00

169 General Expense 31
 184 To Individuals & Co.
 Transferring amount of Bates Extra
 Expense for month of December 1902
 from Bates Accts Rec Ledger into General
 Ledger
 446 Bates Accts Rec 100.00
 77 Bates Extra Expense 100.00

100.00

100.00

Orange, N.J. December 1902

169	General Expenses	31	73.53
	To Individuals & Co.		73.53
	Amount of Cash Discount allowed in prompt settlement of Bate Accts Dec during current month as recorded in Cash Book & folios 111 to 124 both inclusive.		
116	Bate Accts Dec	31	73.53
145	Individuals & Co.	31	21.19
	To General Expenses		21.19
169	Amount of Cash Discount deducted in settlement of Accounts Payable during current month as recorded in Cash Book & folios 111 to 124 both inclusive		
165	Individuals & Co.	31	100.57.60
	To Sundries		
	Amount of Sales for month of December 1902 as recorded in Abstract of Sales folios 295 to 305 both inclusive to be credited to		
169	General Expenses		19.192
173	Sales		100.159.56
177	Manufacturing		612
	To Sundries		
185	To Individuals & Co.		102.57.79
	Amount of Disbursement rendered during month of December 1902 as recorded in Register of Disbursements folios 71 to 80 both inclusive chargeable to		
169	General Expenses		2,193.437
189	Machinery & Tools		360.550
26	Real Estate & Buildings		521.56
177	Manufacturing		776.961
185	Individuals & Companies		151.25

Orange, N.J. December 1902

✓	Sundries	31	
177	To Manufacturing		55526.13
	Amount of Material Transfers for month of December 1902 as recorded in Register of Disbursements folio 80 chargeable to		
169	General Expenses		55526.13
26	Real Estate & Buildings		1908
177	Manufacturing		19657.42
	To Sundries	21	

Orange N.J. January 1903

121	122	123
Drummers	231	
171 To Manufacturing		239.4732
Amount of Material Transfers for month		
of January 1903 as recorded in Register of		
Reimbursements folio 18 chargeable to		
171 General Expense	6547.20	
26 Real Estate Buildings	21.65	
171 Manufacturing	10361.47	

Orange N.J. February 1903

115	116	117
Individuals & Co.	12	
115 To Individuals & Co.		200
Transfer to balance accounts		200
416 Bates Accts Rec	2.00	
211 Geneva Reaper	25	
211 J. Mott & Son	1.75	
416 Bates Accts Rec	2.00	
202 E. M. Johnson	55	
220 J. Mott & Son	1.75	
115 Individuals & Co.	13	
115 To Individuals & Co.		220
To write off indebtedness of H.B. Bennett Co.		220
same being uncollectable per instruction		
of Mr. Culshaw		
416 Bates Accts Rec	220	
3 Bates Suspense	220	
416 Bates Accts Rec	220	
210 H.B. Bennett Co.	220	
115 Dividend	20	
115 To Individuals & Co.		601800
For a dividend of 125 per share on all the		601800
stock of the Company entitled thereto as per		
resolution of the Board of Directors at a special		
meeting held at the Edison Laboratory February 1903		
declared payable Feb. 20 1903. March 1903		
102 Chas. Batchelor	242.44	310.05
100 Wm. Shaw Edison	50	375.00
101 H.B. Auchincloss	250	312.50
1 Samuel Insull	5	6.25
100 Mutual Graphophone Co.	143.00	175.15
1 Wm. V. Edison	2572.21	3590.26
100 John F. Randolph	10	12.50
8 W.C. Zimmerman	5	6.25
10 John C. Stegall	5	6.25
100 J. W. Chesney	5	6.25
102 Wm. C. Cutting	317	396.25
102 Jas. W. Cutting	436.75	545.94
	4814.40	6018.00

Orange N.J. February 1903

146	Notes Receivable	24	1750.00	
145	To Individuals & Cos.		1750.00	
	Note received this day payable June 29 1903 at Franklin National Bank Phila. remaining note of Oct 22 1902			
145	Edison Portland Cement Co.	28	1750.00	
145	Individuals & Cos.	28	22.51	
145	To Individuals & Cos.		22.51	
	Transfer to correct error in posting			
	Bills 11205 & 11205 Rec 21 1902			
146	Bates Accts Rec.	22.51		
145	Tower Mfg & Mouldy Co.	22.51		
146	Bates Accts Rec.	22.51		
3	Taylor Bros.	22.51		
145	Individuals & Cos.	28	250.	
145	To Individuals & Cos.		250.	
	To write off balance due same being uncollectible as per instructions of M. L. L. L.			
146	Bates Accts Rec.	250.		
3	Bates Suspense	250.		
146	Bates Accts Rec.	250.		
212	Amos Advertising Agency	250.		
146	General Expense	28	100.00	
145	To Individuals & Cos.		100.00	
	To transfer amount of Bates Extra Expense for current month from Bates Acct. Rec. Ledger into General Ledger			
146	Bates Accts Rec.	100.00		
146	Bates Extra Expense	100.00		
145	Individuals & Cos.	28	4674	
145	To General Expense		4674	
	Amount of Cash Discount deducted in settlement of Accounts Payable during current month as recorded in Cash Recd 25 folios 131 to 136 both inclusive			

Orange N.J. February 1903

170	General Expense	28		
145	To Individuals & Cos.		627.9	627.9
	Amount of Cash Discount allowed on prompt settlement of Bates Accounts Receivable during current month as recorded in Cash Recd 25 folios 131 to 136 both inclusive			
146	Bates Accts Receivable	627.9		
145	Individuals & Cos.	28	174.9	174.9
145	To Individuals & Cos.		174.9	
	To write off sundry debit and credit balances appearing in the following accounts now Bates Accts Receivable Ledger			
146	Bates Accts Rec.	174.9		
116	Rowen & Son	75		
226	Brown & Buckingham	25		
219	Conger Kahn & Kibbs	12		
207	C. Francis	32		
220	C. M. Fennell	16		
216	F. W. Henley	72		
217	C. L. Hatch	70		
217	A. V. Westmark	129.3		
217	C. A. Fickler	10		
207	J. Louis Korman	114		
146	Macmillan & Co.	21		
216	Murison & Wright	27		
101	M. M. Tamara	200		
216	C. E. Workman	10		
212	H. W. Martin	67		
222	J. D. Clarkson	03		
222	Burnet Woodin Co.	25		
105	Gunn & Co.	05		
202	Illinois State Telegraph	06		
207	H. W. Newton	26		
211	Bank of America	09		
21	Boslin Bros.	33		
146	Bates Suspense	174.9		
146	Bates Accts Rec.	174.9		

Orange N.J. February 1903

153 Sales 21
 153 To correct distribution of bill 35832.90810
 4 * 25832.13655 which should have
 been credited to Misc. instead of Wax &

8 Wax 1045.35
 26 Misc Order 1045.35

176 General Expenses 21
 177 To Manufacturing
 Transferring amount of Labor & Material
 on the following Special Shop Orders
 from Misc to Mfg.
 No 730 140.76 772 - 372 = 818.100

141 Misc Order 1405.48

150 Bond Interest 28
 156 To Unpaid Bond Interest
 Amount of Bond Interest due on Coupon
 Series #1, remaining unclaimed and
 unpaid, July 28-1903 and subject to demand
 Amount of series 7500.00
 Paid 7500.00

155 Individuals & Cos 28
 To Sundries
 Amount of Sales for month of February 1903
 as recorded in Abstract of Sales folio 320.6325
 exclusive to be credited as follows

170 General Expenses

153 Sales

177 Manufacturing

8 Profit & Loss 21

185 To Individuals & Cos
 To write off amount of Bates Expenses for
 fiscal year ending July 27-1903

461 Bates Acct. Bal. 55.00

3. Bates Expenses 55.00

1045.35

1045.35

1405.48

1405.48

5000

5000

79106.08

357.22

7352.941

21.45

350.00

35.00

Orange N.J. February 1903

17 Manufacturing 28
 177 To Manufacturing
 To transfer amount of Labor & Material
 charged against Shop Order 35046 from
 Miscellaneous to Cabinet account
 136 Cabinet 161.91
 141 Miscellaneous 161.91

155 Individuals & Cos 28
 155 To Individuals & Cos
 Transferring balance standing to the
 credit of F. A. Edison, July 27-1903 to the
 account of National Phonograph Co.
 111 F. A. Edison 6087.66
 2112 National Phonograph Co. 6087.66

✓ Sundries 28
 15 To Individuals & Cos
 Amount of Disbursements vouchers
 during month of February 1903 as
 recorded in Register of Disbursements
 folios 90 to 97 both inclusive charged to

170 General Expenses 23904.20

149 Machinery & Tools 425.80

24 Real Estate & Buildings 5003.24

177 Manufacturing 51087.10

155 Individuals & Cos 2124

✓ Sundries 28
 177 To Manufacturing
 Amount of Material transfers for
 month of February 1903 as recorded in
 Register of Disbursements folio 97 charged to

170 General Expenses 4760.98

24 Real Estate & Buildings 22.76

177 Manufacturing 14808.78

161.91

161.91

6087.66

6087.66

82945.08

19669.52

Orange N.J. February 1903

17	Manufacturing	26	208.56
17	To General Expenses		208.56
	To correct distribution of Acetylene Machine		
	*274. Feb. 21, 1903. changed to Rent Expense		
	should be Raw Material		
18	Raw Material	208.56	
17	Manufacturing	28	354.86
17	To Manufacturing		354.86
	To write off the following amounts to		
	make Raw Material & Wapanning equal		
	inventory		
122	Wapanning	9012.48	
156	Raw Material	7657.62	
17	Phonograph	354.86	
17	Manufacturing	28	14302.20
170	To General Expenses		14302.20
	To transfer amount standing to the credit		
	of Box Factory to the credit of General Expenses		
134	Box Factory	14302.20	
17	Manufacturing	28	8577.57
170	To General Expenses		8577.57
	To transfer expense directly chargeable to		
	Natus Mfg Co business		
26	Acetylene Machine	8577.57	
8	Profit & Loss	28	39072.00
	To Sundries		39072.00
	To write off the following accounts		
146	Dividend		1500.00
161	Dividend		24672.00
101	Sales	28	7613.57
101	To Sales		7613.57
	To transfer balance to credit of Scrap %		
16	Phonograph %		
22	Scrap	7613.57	
2	Phonograph	7613.57	

Orange N.J. February 1903

17	Manufacturing	28	208128.41
170	To General Expenses		208128.41
	To distribute pro rata General Expense and		
	Depreciation over the following accounts		
17	Phonographs	112,917.80	
28	Acetylene Machine	8667.91	
124	Box	33176.80	
141	Miscellaneous	5720.43	
151	Spring Motor	3774.16	
131	Tan Motor	2201.66	
159	Proj. Kinetoscope	34136.16	
136	Cabinet	80805.01	
153	Edison Motor	8019.52	
154	Sales	28	83544.902
17	To Manufacturing		83544.902
	To transfer cost of Sales of the following		
	accounts for fiscal year ending Feb. 28, 03		
2	Phonograph %	423,317.01	17
154	Acetylene Machine	44616.97	28
66	Box Motor	1231.56	117
8	Box	141658.03	141
26	Miscellaneous	15957.25	141
144	Spring Motor	14257.29	151
106	Tan Motor	6864.68	131
38	Proj. Kinetoscope	12335.22	159
56	Raw Material Sales	2665.14	104
69	Cabinet	113064.53	136
77	Edison Motor	52907.29	153

Orange N.J. February 28-1903

104	Sale	28	10,191.89	
8	To Profit & Loss		10,191.89	
	For profits realized on the following accounts during fiscal year ending Feb'y 28-1903.			
2	Photographs	64928.97		
14	Auto Threading Machine	22001.74		
66	Bates Merchandise	1199.61		
8	Wax	32305.11		
26	Miscellaneous	688.35		
106	Spring Motor	1018.38		
106	Tan Motor	559.19		
38	Long Kinoloscope	2462.82		
56	Raw Material Sales	600.44		
69	Cabinet	6102.11		
77	Edison Motor	11541.22		
8	Profit & Loss	28		
66	To Allowance for Depreciation		86200	16200
	To write off amount of Depreciation on Real Estate Building during fiscal year ending Feb'y 28-1903 owing to the destruction of Building #6 \$462 ⁰⁰ & Building #7 \$100 ⁰⁰			
83	Bates Mfg Co	28		
145	To Individuals & Co		14,866.34	14,866.34
	To transfer above amount from Dr Co Ledger into General Ledger			
203	Bates Mfg Co	14,866.34		

Orange N.J. March 1903

16	Individuals & Co.	30	
	To Sundries		95723.20
	Amount of Sales for month of March 1903 as recorded in Abstract of Sales folios 329 to 333 both inclusive to be credited to		
170	General Expense		15866
154	Sales		95564.60
		30	
✓	Sundries		
165	To Individuals & Co.		89676.78
	Amount of Rebursement vouchers during month of March 1903 as recorded in Register of Rebursements folios 99 to 104 both inclusive chargeable to		
170	General Expense		2041.171
27	Real Estate Buildings		474
171	Manufacturing		69235.31
165	Individuals & Companies		2495
		30	
✓	Sundries		
178	To Manufacturing		24270.32
	Material Transfers during month of March 1903 as recorded in Register of Rebursements folios 104 chargeable to		
170	General Expense		534.183
27	Real Estate Buildings		1612
178	Manufacturing		18946.2

Orange N.J. March 1903

35
185 Individuals & Co. 38.00

185 To Individuals & Co.
Transferring amount of check dated Feb. 20
drawn on N.J. Trust Nat'l Bank from Bates
Accts Rec Ledger into Dr Cr Ledger

7 J.W. Blackstone 38.00

46 Bates Accts Rec 38.00

100 J.W. Blackstone 38.00

27
185 Individuals & Co. 37.3

185 To Individuals & Co.
Transferring amount of money rec'd from
Dr Cr Ledger into Bates Accts Rec Ledger

100 Town Mfg & Novelty Co. 37.3

46 Bates Accts Rec 37.3

275 Town Mfg & Novelty Co. 37.3

31
170 General Expense 81.57

185 To Individuals & Co.
Amount of Cash Discount allowed on prompt
settlement of Bates Accts Receivable during
month of March 1903 as recorded in
Cash Book & files 137 to 142 inclusive

46 Bates Accts Rec 81.57

31
185 Individuals & Co. 98.74

170 To General Expense 98.74
Amount of Cash Discount deducted in
settlement of Acct Payable during month
of March 1903 as recorded in Cash Book &
files 137 to 142 inclusive

31
170 General Expense 100.00

185 To Individuals & Co.
Transferring amount of Bates Extra
Expense for month of March 1903 from
Bates Accts Rec Ledger into General Ledger

46 Bates Accts Rec 100.00

275 Bates Extra Expense 100.00

Orange N.J. April 1903

1.0
185 Individuals & Co. 45.00

185 To Individuals & Co.
Transferring balance due from account
of Roberts & Son to Associated Merchants
of N.J. for collection

46 Bates Accts Rec 45.00

210 Associated Merchants of N.J. 45.00

46 Bates Accts Rec 45.00

2 Roberts & Son 45.00

1.0
185 Individuals & Co. 11.25

185 To Individuals & Co.
To write off 25% of balance due from
Roberts & Son, we having accepted 75%
of account in full settlement

46 Bates Accts Rec 11.25

3 Bates Suspense 11.25

46 Bates Accts Rec 11.25

210 Associated Merchants of N.J. 11.25

1.0
185 Individuals & Co. 34.8

185 To Individuals & Co.
Transferring amount of collection charges
on order drawn on Roberts & Son

104 Associated Merchants of N.J. 34.8

46 Bates Accts Rec 34.8

210 Associated Merchants of N.J. 34.8

1.5
185 Individuals & Co. 2.57

185 To Individuals & Co.
Transferring from Dr Cr Ledger into
Bates Accts Rec Ledger the following items

2 W. H. Force & Co. 1.50

104 Town Mfg & Novelty Co. 1.07

46 Bates Accts Rec 2.57

13 W. H. Force & Co. 1.50

2 Town Mfg & Novelty Co. 1.07

Orange NJ April 1903

101	Individuals & Co	20		
111	To Individuals & Co			
	To credit off balance existing in account			
	of Foreman House Dept			
46	Bates Accts Rec	175		
5	Bates Suspense	175		
46	Bates Accts Rec	175		
103	Foreman House Dept	175		
		30		
111	Individuals & Co			
111	To Individuals & Co			
	Transfer to balance account			
46	Bates Accts Rec	1067		
4	Harwin Power	1067		
46	Bates Accts Rec	1067		
212	Power Locomotive & Ribbon Co	1067		
		30		
110	General Expense			
111	To Individuals & Co			
	Transferring amount of Bates Extra			
	Expense for month of April 1903 from			
	Bates Accts Rec Ledger into General Ledger			
46	Bates Accts Rec	100.00		
5	Bates Extra Expense	100.00		
		30		
185	Individuals & Co			
170	To General Expense			
	Amount of Cash Discount deducted in			
	settlement of Accounts Payable during			
	April 1903 as recorded in Cash Book &			
	folio 143 to 149 both inclusive			
		30		
174	General Expense			
185	To Individuals & Co			
	Amount of Cash Discount allowed in			
	prompt settlement of Bates Accts Rec			
	during April 1903 as recorded in Cash			
	Book & folios 143 to 149 both inclusive			
46	Bates Accts Rec	74.95		

Orange NJ April 1903

111	Individuals & Co	20		
111	To Individuals & Co			
	To correct error in posting Voucher 201			
	Mar 31 1902			
4	Keuffel & Esser Co	78.29		
6	J. Henney	782.9		
		30		
178	Manufacturing			
170	To General Expense			
	To correct distribution of Accts Payable			
	Voucher 196 Mar 1902 changed to			
	J. C. in error			
17	Raw Material	400		
		30		
189	Machinery & Tools			
170	To General Expense			
	To correct distribution of Accts Payable			
	Voucher 225 Dec 1902 267 Feb 1903 &			
	Mar 7 changed to Maintenance of Tools			
	in error			
		30		
185	Individuals & Co			
185	To Individuals & Co			
	Transfer to correct the following entries			
	in Abstract of Sales during March 1903			
	Rev 27998 2.67 Chd Mfg Co. should be			
	28012 4 12.16 " " " Mfg Co			
	28013 4 11.90 " " " "			
702	Edison Manuf Co	21.37		
715	National Phone Co	21.37		
		30		
185	Individuals & Co			
	To Sundries			
	Amount of Sales for month of April			
	1903 as recorded in Abstract of Sales			
	folio 237 to 244 both inclusive to be			
	Credited to			
170	General Expense			
184	Sales			

Orange NJ April 1903

30		
165	<u>Surplus</u>	
	<u>To Individuals & Co</u>	14729.01
	Amount of Reimbursements vouchered	
	for month of April 1903 as recorded in	
	Register of Reimbursements folio 106.6-112	
	both inclusive chargeable to	
170	<u>General Expense</u>	15406.21
171	<u>Machinery & Tools</u>	7463.00
172	<u>Real Estate & Buildings</u>	2084.1
173	<u>Manufacturing</u>	68267.19
175	<u>Individuals & Companies</u>	10420.
30		
176	<u>Surplus</u>	
	<u>To Manufacturing</u>	26781.83
	Amount of Material Transfers for month	
	of April 1903 as recorded in Register of	
	Reimbursements folio 112 chargeable to.	
170	<u>General Expense</u>	6884.76
171	<u>Real Estate & Buildings</u>	11.8
173	<u>Manufacturing</u>	19895.87

Orange NJ May 1903

29		
181	<u>Individuals & Co</u>	
186	<u>To Individuals & Co</u>	338
	To correct error in posting Sur \$33.99	338
	Apr 27-1903	
46	Bates Accts Rec	3.38
46	H. Bantard & Co	3.38
46	Bates Accts Rec	3.38
46	Hammington & Co	3.38
29		
170	<u>General Expense</u>	125.00
186	<u>To Individuals & Co</u>	125.00
	Transferring amount of Bates Extra Expense	
	for month of May 1903 from Bates Accts	
	Rec Ledger into General Ledger	
46	Bates Accts Rec	125.00
43	Bates Extra Expense	125.00
20		
164	<u>Dividend</u>	6018.00
186	<u>To Individuals & Co</u>	6618.00
	For a dividend of $\frac{1}{2}$ per share on all	
	stock of the Company entitled thereto	
	declared payable May 20-1903 as per	
	resolution of the Board of Directors at	
	a Special Meeting held at the Edison	
	Laboratory, West Orange NJ May 18, 1903.	
102	Chas. Batchelor	248.44 310.05
100	Mr. Jas Edison	50 57.00
101	H. B. Auchincloss	350 200.00
1	Samuel Knott	5 6.25
100	International Graphophone Co	142.0 171.50
111	Jas A. Edison	2072.21 2598.24
100	John F. Randolph	10 12.50
8	W. B. Schmore	5 6.25
101	John C. Searles	5 6.25
104	W. M. Chesney	5 6.25
100	Walter Cutting	317 396.25
102	Jas M. Cutting	256.75 545.94
		48114.40 6018.00

Orange N.J. May 1903.

116	Individuals & Co.	29	19245
117	To General Expense		19248
	Amount of Cash Discount deducted in prompt settlement of Accounts Payable during May 1903 as recorded in Cash Book 16 folios 167 both inclusive		
117	General Expense	29	6958
116	To Individuals & Co.		6958
	Amount of Cash Discount allowed in settlement of Bate's Accounts Receivable during month of May 1903 as recorded in Cash Book 6 folios 167 both inclusive		
116	Bate Accts. Receivable	6958	
116	Individuals & Co.	29	1724
116	To Individuals & Co.		1724
	To correct error in posting Inv 4/13. 4416.3.		
4/1	Bate Accts. Rec.	1724	
13	J. Baumgarten & Son	1724	
16	Bate Accts. Rec.	1724	
12	Baumgarten & Co.	1724	
116	Individuals & Co.	29	75981.88
	To Sundries		
	Amount of Sales for month of May 1903 as recorded in Abstract of Sales folios 341 to 350 both inclusive to be credited as follows.		
170	General Expense		1844.90
171	Manufacturing		23.11
180	Sales		75770.87

Orange N.J. May 1903.

✓	Sundries	29	
116	To Individuals & Co.		84695.05
	Amount of Disbursements vouchers during month of May 1903 as recorded in Register of Disbursements folios 115 to 120 both inclusive chargeable to		
170	General Expense		16737.15
189	Machinery & Tools		7563.5
21	Real Estate & Buildings		2590.56
31	Permittees & Patents		20.0
171	Manufacturing		6416.47
180	Individuals & Companies		4375
✓	Sundries	29	
171	To Manufacturing		17267.17
	Amount of Material Transfers for month of May 1903 as recorded in Register of Disbursements folios 120 chargeable as follows.		
170	General Expense		3547.32
189	Machinery & Tools		183
21	Real Estate & Buildings		24.45
171	Manufacturing		13693.87

Orange N.J. June 1903

186	Notes Receivable	8	1450.00
186	Received this day note payable on the 29th of October 1902 at Franklin National Bank, Phila.		1450.00
5	Edison Portland Cement Co.	1850.00	
186	Individuals & Cos	3.0	64
186	Transferring amount paid through Petty Cash from J. Co. Ledger into Bates Accts Rec Ledger		64
46	Bates Accts Rec	64	
201	William Stationery Co.	34	
106	A. Casnagie	30	
201	William Stationery Co.	34	
203	A. Casnagie	30	
186	Individuals & Cos	3.0	16
186	Transferring amount of Cash Discount paid to W. Kimball June 9, 1903 from J. Co. Ledger into Bates Accts Rec Ledger		16
46	Bates Accts Rec	16	
101	W. Kimball	16	
201	W. Kimball	16	
186	Individuals & Cos	3.0	250
186	Transferring amount of Collecting charges for advertisement to P. M. Smiley from J. Co. Ledger into Bates Accts Rec Ledger		250
107	Associated Merch. of N.Y.	250	
46	Bates Accts Rec	250	
110	Associated Merch. of N.Y.	250	

Orange N.J. June 1903

186	Individuals & Cos	3.0	657
186	Transferring amount due to attorneys account for collection		657
46	Bates Accts Rec	657	
110	Associated Merchants of N.Y.	657	
46	Bates Accts Rec	657	
107	P. M. Smiley	657	
186	Individuals & Cos	3.0	302.78
170	General Expense		302.78
	Amount of Cash Discount deducted in prompt settlement of Accounts Payable during June 1903 as recorded in Cash Book 6 folios 8 to 14 both inclusive		
170	General Expense	3.0	56.65
186	Individuals & Cos		56.65
	Amount of Cash Discount allowed in prompt settlement of Bates Accts Rec during June 1903 as recorded in Cash Book 6 folios 8 to 14 both inclusive		
46	Bates Accts Rec	56.65	
170	General Expense	3.0	1250.00
186	Individuals & Cos		1250.00
	Transferring amount of Bates Extra Expense for month of June 1903 from Bates Accts Rec Ledger into General Ledger		
46	Bates Accts Rec	125.70	
170	Bates Extra Expense	125.70	
186	Individuals & Cos	3.0	78896.71
	Amount of Sales for month of June 1903 as recorded in Abstract of Sales plus 5% to 57 both inclusive to be credited as follows		
170	General Expense		29922
170	Sales		78896.71
170	Manufacturing		825

Orange N.J. June 1903

✓ Sundries	30	
186 To Individuals & Cos		922.59 24
Amount of Disbursements vouchered during month of June 1903 as recorded in Register of Disbursements folios 122 to 128 both inclusive chargeable to		
170 General Expenses	20918.61	
189 Machinery & Tools	253.50	
27 Real Estate & Buildings	3645.67	
31 Furniture & Fixtures	108.12	
176 Manufacturing	667.57 8	
186 Individuals & Cos	112.56	
30		
✓ Sundries		
176 To Manufacturing		2030.76
Amount of Material Transferred for month of June 1903 as recorded in Register of Disbursements folio 128 chargeable to		
170 General Expenses	3250.42	
27 Real Estate & Buildings	115.21	
31 Furniture & Fixtures	41.82	
176 Manufacturing	16900.91	

Orange N.J. July 1903

186 Individuals & Cos	31	
186 To Individuals & Cos		57.5
Transferring the following amounts from Dr. Cash Disbursements to Bates Accts Rec Ledger		
206 Jas S. Bayle & Co	2.00	
104 Power Mfg & Novelty Co	3.15	
176 Bates Accts Rec	5.15	
206 Jas S. Bayle & Co	2.00	
2 Power Mfg & Novelty Co	3.15	
31		
186 Individuals & Cos		19
170 To General Expenses		19
To debit account of Geo H Hewitt & Co with amount of Cash Discount allowed on receipt of check, which was subsequently returned - no sales being effected		
476 Bates Accts Rec	.19	
3 Geo H Hewitt & Co	.19	
31		
186 Individuals & Cos		117
186 To Individuals & Cos		117
To correct error in posting - Bill issued June 24 1903		
476 Bates Accts Rec	117	
101 Thorp Mfg Co	117	
476 Bates Accts Rec	117	
5 Thorp & Martin	117	
31		
186 Individuals & Cos		10
186 To Individuals & Cos		10
Transferring Bill # 4122 June 5 1903 from N.Y. to Phila. 476		
476 Bates Accts Rec	10	
5 Hon Mann Co Phila	10	
476 Bates Accts Rec	10	
1 Hon Mann Co N.Y.	10	

Orange N.J. July 1903

170	General Expense	31	100.00	
186	To Individuals & Co		100.00	
	Transferring amount of Bates Extra Expense for month of July 1903 from Bates Acct Rec. Ledger into General Expense			
146	Bates Acct Rec	100.00		
73	Bates Extra Expense	100.00		
186	Individuals & Co	31	242.35	
178	To General Expense		242.35	
	Amount of Cash Account deducted in prompt settlement of Accounts Payable during month of July 1903 as recorded in Cash Book 1/2 folios 15 to 20 both inclusive			
170	General Expense	31	44.52	
186	To Individuals & Co		44.52	
	Amount of Cash Account allowed in prompt settlement of Bates Acct Receivable for month of July 1903 as recorded in Cash Book 1/2 folios 15 to 20 both inclusive			
146	Bates Acct Rec	44.52		
170	General Expense	31		
186	To Individuals & Co		80.20.64	
	Amount of Disbursements & Payments during month of July 1903 as recorded in Register of Disbursements folios 128 to 136 and to the charge & no. previous			
170	General Expense		17.66.46	
189	Machinery & Tools		37.77.47	
17	Real Estate & Building		28.84.41	
31	Furniture & Fixtures		63.04	
178	Manufacturing		16.17.83	
186	Individuals & Co		69.20	

Orange N.J. July 1903

170	General Expense	31	13.11.18	
189	Machinery & Tools		7.97	
17	Real Estate & Building		112.00	
31	Furniture & Fixtures		5.12.78	
178	Manufacturing		17.9.10	
186	Individuals & Co	31	70.42.69	
170	General Expense		27.7.08	
186	To Individuals & Co		7.02.67	
	For amount of Sales recorded in Abstract of Sales during month of July 1903 and to be credited as previous			
170	General Expense		1.61	
186	Individuals & Co			

Orange 28 August 1900

131	General Expense	100.00	
132	Individuals & Co		100.00
	Transporting amount of Bates Extra Expense for month of Aug 1900 from Bates Accts. Mat. Bridge with General Ledger		
136	Bates Accts. Mat. 100.00		
137	Bates Extra Expense 100.00		
138	General Expense	107.5	
139	Individuals & Co		107.5
	Amount of Cash Disbursements allowed in prompt settlement of Bates Accts. Obsolete for month of Aug 9, 1900 as recorded in Cash Book 11		
	from 21.6.22 - minimum		
140	Bates Accts. Mat. 107.5		
141	Individuals & Co	99.49	
142	General Expense		99.49
	Amount of Cash Disbursements allowed in settlement of accounts payable during month of August 1900 as recorded in Cash Book 11		
	from 21.6.22 - minimum		
143	Individuals & Co	105.60	99.49
	General Expense		
144	Machine & Tools	16.41	5.67
145	Real Estate & Buildings	41.28	20
146	Furniture & Fixtures	28.88	60
147	Manufacturing	1.89	40
148	Individuals & Co	78.91	70
		80.40	

Orange 29 August 1900

149	Individuals & Co		89.69	1.37
150	General Expense			
	Transporting amount of sales recorded in Abstract of Sales during month of August 1900 and to be credited to persons			
151	General Expense		202.66	
152	Sales		87.86	245
153	Manufacturing		2.46	
154	Individuals & Co			
155	Manufacturing		24.71	1.57
	Amount of Material Transported for month of August 1900 as recorded in Abstract of Disbursements from 10.1.1900 Change to			
156	General Expense		111.50	
157	Real Estate & Buildings		11.85	
158	Furniture & Fixtures		107.87	
159	Manufacturing		2.09	16.79
160	Individuals & Co		106.48	
161	Individuals & Co			56.48
	Note from the Valencia Stamp Co. dated Aug 14 1900 at one month forward of Valencia Steel Bank New Orleans Conn. in settlement of their acct. to July 30 1900			
162	Bates Accts. Mat. 106.48			
163	The Valencia Stamp Co. 56.48			
164	Bates Accts. Mat. 56.48			
165	General Expense		3.47	
166	Sales			
	To correct distribution of bills Nov 2001 & 2002, should have been charged to Plantation			
167	General Expense			
168	Phone	3.47		

Orange Aug 9 1903

Debit		Credit	
154	Debit	Individual & Co	600.00
155	Individual & Co	600.00	
To a dividend of 1% per share on all stock of the company entitled thereto payable Aug 21/03			
156	Chas. D. Hatch	288.45	310.55
157	Marshall Edison	30	37.50
158	J. A. McClintock	50	38.50
159	Samuel J. Smith	5	6.25
160	Jefferson Smith	1500	175.50
161	Thomas A. Edison	70.72	500.26
162	Opportunity Randolph	10	12.50
163	J. E. McQuinn	5	6.25
164	John C. Hearle	5	6.25
165	J. C. M. Conway	5	6.25
166	Walter C. Callie	515	296.25
167	Sam D. Cuthbert	431.25	545.00

Orange September 1903

Debit		Credit	
156	Individual & Co	600	
157	Individual & Co	600	
To transfer claim of Sept 1st paid to the Old Dominion Steamship Co. 500.00			
158	Bates Accts Rec	600	
201	Old Dominion Paper Co	600	
159	Bates Accts Rec	600	
160	Old Dominion Paper Co	600	
161	Individual & Co	175	
162	Individual & Co	175	
To transfer the following accounts			
163	Bates Accts Rec	175	
164	The State of Texas	175	
165	Bates Accts Rec	175	
166	E. H. Renshaw	175	
167	Individual & Co	770	
168	Individual & Co	770	
To suspense the following items			
169	Suspense	770	
170	Individual & Co	600	
171	Individual & Co	600	
To transfer from Indiv & Co. to Bates Accts Rec the following items			
172	Bookkeeper Chas. C. P.	600	
173	Bookkeeper Chas. C. P.	600	
174	Bates Accts Rec	600	
175	Bookkeeper Chas. C. P.	600	
176	Individual & Co	100	
177	Individual & Co	100	
To transfer August balance \$107 from Natl Phone Co. Orange to Natl Phone Co. Chicago			
178	Natl Phone Co. Orange	107	
179	Natl Phone Co. Chicago	107	

Orange N.J. September 1900

186	Individuals & Co.	7.66	
187	Individuals & Co.	9.04	
To transfer balance of Natl Phone Co amount reported from Bates Co for bridge to Individuals & Co. Sigs.			
4	Bates Co. Bates	2.66	
100	Natl Phone Co	7.66	
2	Natl Phone Co	7.66	
186	Individuals & Co.	17.20	
186	Individuals & Co.	17.20	
To transfer amount credited to Thorp & Martin			
4	Bates Co. Bates	10.00	
✓ 4	Thorp & Martin	10.00	
4	Bates Co. Bates	19.25	
3	Liberty Bureau	19.25	
186	Individuals & Co.	46.29	
186	Individuals & Co.	46.29	
To transfer bill 2000 1000 1000 1000 and 100 1000 1000 same was charged in Abstract of sales to Natl Phone Co and Natl Phone Co			
1	2. H. H. Co.	40.9	12.6
186	Individuals & Co.		
100	Sales	1.00	
To correct error in Abstracting bill 2000 1000 1000 1000 same was charged in Abstract of sales to Natl Phone Co and Natl Phone Co			
1	2. Natl Phone Co	1.00	3
186	Manufacturing	62.08	
186	General Expense	62.08	
To correct error in distribution on "Korba" 100 100			
186	Raw Material	62.08	

Orange N.J. September 1900

186	Manufacturing	10.80	
186	Manufacturing	10.80	
To transfer 10.80 from Manufacturing & Tools to Miscellaneous due to wrong distribution of shop order 9.10 (Aug. Aug. 10.80)			
186	Miscellaneous	10.80	
186	General Expense	100.00	
186	General Expense	100.00	
Transferring amount of Bates Co. Bates Expense for month of September 1900 from Bates Co. Bates into General Expense			
4	Bates Co. Bates	100.00	
2	Bates Co. Bates	100.00	
186	Individuals & Co.	127.72	
186	General Expense	127.72	
Amount of Cash Disbursements deducted in settlement of Cash Disbursements during month of Sept 1900 as recorded in Cash Book (100 100 100 100)			
186	General Expense	10.00	
186	General Expense	10.00	
Amount of Cash Disbursements allowed in prompt settlement of Bates Co. Bates for month of Sept 1900 (100 100 100 100)			
4	Bates Co. Bates	10.00	
186	Individuals & Co.	112.51 50	
The amount of sales recorded in Abstract of sales during month of September 1900 and to be carried as follows			
186	General Expense	172.51	
186	Sales	112.51 50	
186	Manufacturing	10.00	

Orange 27 September 1903

✓	Summaries	20	
176	Individuals & Co	12887.00	
	Account of Disbursements received during month of September 1903 as recorded in Register of Disbursements taken to date and to be charged as follows		
177	General Expenses	1880.97	
178	Manufacturing & Repair	200.00	
179	Coal, Oil & Building	299.15	
180	Furniture & Fixtures	221.50	
181	Manufacturing	103.65	
182	Individuals & Co	26.65	
✓	Summaries	20	
175	Manufacturing	27,070.70	
	Account of Material Transferred for month of September 1903 as recorded in Register of Disbursements taken to date and to be charged as follows		
176	General Expenses	450.40	
177	Coal, Oil & Building	160.89	
178	Furniture & Fixtures	125.25	
179	Manufacturing	21,069.15	

Orange 27 October 1903

183	Individuals & Co	7	
184	Individuals & Co	27.00	27.00
	Note from Valentine Stamp Co. dated October 17, on one month payable at Merchants National Bank, New Haven, Ct. to balance this up to Oct 15, 1903		
185	Bates Accts Rec	27.00	27.00
186	Valentine Stamp Co	27.00	27.00
187	Bates Note Receivable	27.00	27.00
188	Bates Accts Receivable	27.00	27.00
189	Notes Receivable	21	189.00
190	Individuals & Co	189.00	189.00
	Received this day Note payable on the 25th of February 1904 at Merchants National Bank, New Haven, Ct. to balance this up to Oct 15, 1903		
191	Edison Portland Cement Co	189.00	189.00
192	Manufacturing	21,069.15	21,069.15
193	Manufacturing	21,069.15	21,069.15
	To correct distribution of these materials 190-430-15 46-27-15 41-27-15 41-27-15 41-27-15 191-430-15 46-27-15 41-27-15 41-27-15 41-27-15 192-430-15 46-27-15 41-27-15 41-27-15 41-27-15 193-430-15 46-27-15 41-27-15 41-27-15 41-27-15		
194	Phos	21,069.15	21,069.15
195	Individuals & Co	115	115
196	Individuals & Co	115	115
	To transfer the following amounts		
197	Bates Accts Rec	115	115
198	Sheffield Land & Improvement Co	115	115
199	Ostoria Knitting Mills	75	75
200	Sheffield Land & Improvement Co	40	40
201	Ostoria Knitting Mills	75	75

Orange 22nd October 1903

117	Individuals & Co	104.97	
171	General Expense		104.97
Amount of Cash Disbursements deducted in settlement of accounts Payable during month of October 1903 as recorded in Cash Book of folio 286 & 287 m.c.			
171	General Expense	63.72	
171	Individuals & Co		63.72
Amount of Cash Disbursements allowed in prompt settlement of Bates Costs Rec for month of October 1903 as recorded in Cash Book of folio 286 & 287 m.c.			
4	Bates Costs Rec	63.72	
171	Individuals & Co	168.706.01	
171	Manufacturing		168.706.01
For amount of Sales recorded in Abstract of Sales during month of Oct 1903 to be credited to			
171	General Expense		20.093
171	Machinery & Tools		17.662
171	Sales		148.850.15
171	Manufacturing		3.36
4	Procedures		
171	Individuals & Co	111.963.67	
For amount of Disbursements entered in Register of Disbursements during month of October 1903 folio 104 & 105 m.c. and charged to as follows			
171	General Expense	1.962.02	
171	Machinery & Tools	3.814.87	
171	Real Estate & Building	126.00	
171	Manufacturing	67.209.82	
171	Individuals & Co	15.20	

Orange 22nd October 1903

171	Individuals & Co	15.20	
171	General Expense		15.20
To correct distribution on folio 112 October 1903			
108	C. Brown	34.50	
108	D. Brown	31.00	
171	Manufacturing		165.87
Amount of Material Transfers for month of October 1903 as recorded in Register of Disbursements folio 104 & 105 m.c. charged to			
171	General Expense	7.614.70	
171	Real Estate & Building	94.01	
171	Furniture & Fixtures	17.77	
171	Manufacturing	25.654.9	
171	General Expense	12.50	
171	Individuals & Co		12.50
Transferring amount of Bates Costs Rec expended for month of Oct 1903 from Bates Costs Rec Ledger to			
4	Bates Costs Rec	125.00	
1. 2	Bates Extra Expense	125.00	

Orange 26 November 1903

165	Dividend	20	601800	601800
167	Individuals & Cos			601800
For a dividend of 15% see where one acc. dec. of the company and the 15% share payable November 20, 1903.				
100	Wm. A. Edison	281.50	8310.50	
100	Wm. A. Edison	30	87.50	
101	H. J. Cushman	250	312.50	
1	General Invt	5	6.25	
100	National Supply Co	1430	1787.50	
1	Thomas A. Edison	2972.21	2090.21	
100	J. B. Standish	10	12.50	
8	W. B. Schenck	5	6.25	
100	Wm. A. Edison	5	6.25	
100	J. L. M. Chaney	5	6.25	
100	Walter Cullling	310	396.25	
100	James Cullling	536.75	545.94	
172	Individuals & Cos		200	200
To transfer the above amount from National Phone Co. Depts. to Bates Accts. Bates Accts. Ind. & Cos.				
100	National Phone Co	200		
4	Bates Accts. Co	200		
4	Bates Accts. Co	200		
300	Edison Mfg. Co	200		
189	Individuals & Cos		561	561
187	Individuals & Cos			561
To correct error in above list of divs. Bill 2000 charged to National Phone Co. and to Edison 20222.21				
1	Thomas A. Edison	26		
2	Edison Mfg. Co	5.25		
3	National Phone Co	5.46		

Orange 26 November 1903

187	Individuals & Cos		15	15
To transfer the following accounts				
4	Bates Accts. Co	10		
100	Maryland Agricultural College	15		
4	Bates Accts. Co	15		
203	H. B. McDowell	15		
189	Individuals & Cos		502.25	502.25
187	Individuals & Cos			502.25
To transfer above amount from Creative Tool & Supply Co. to Edison Manufacturing Co.				
11	Creative Tool & Supply Co	502.25		
2	Edison Mfg. Co	502.25		
187	Individuals & Cos		262	262
187	Individuals & Cos			262
To charge Tampa Photo & Supply Co with check of \$250 drawn to the order of Edison Mfg. Co. being money received by us belonging to the Edison Mfg. Co.				
100	Tampa Photo & Supply Co	250		
3	Edison Mfg. Co	250		
187	Individuals & Cos		226	226
187	Individuals & Cos			226
To transfer the following accounts				
100	Tower Mfg. Co	226		
4	Bates Accts. Co	226		
2	Tower Mfg. Co	226		
187	Individuals & Cos		480	480
187	Individuals & Cos			480
To transfer the following accounts				
4	Bates Accts. Co	480		
100	Martin & Co	480		
4	Bates Accts. Co	480		
103	R. M. Martin & Co	480		

Orange 22 November 1903

187	Individuals & Co	14.55	
187	Individuals & Co	14.55	
To transfer above amount from National Phone Co. to Edison Phone Works Ledger			
187	(Ed. Holdings) 14.55		
2	National Phone Co. 14.55		
187	Individuals & Co	700.00	
1	Securities		
Two excepts: Drafts this day payable @ 20% to Bays respectively payable at Union National Bank Newark N.J. with interest @ 6% in settlement of account to Oct 1st 1903			
187	Notes Payable	2,500.00	
187		2,500.00	
1	Bridgeport Bonds 2500.00		
1	" " 3000.00		
1	General Expense		
187	Individuals & Co	701.14	
Amount of Cash Disbursements allowed in payment settlement of Bates Accts. Bn for month of Nov 1903 as recorded in Cash Book 16 Jan 1904			
187	Bates Accts Bn 701.14		
187	Individuals & Co	1246.7891	
1	Securities		
The amount of Cash recorded in Abstract Sales during month of November 1903 to be credited as follows:			
187	Machinery & Tools		
187	General Expense	14.55	
187	Sales	17.141	
187	Manufacturing	1246.6983	
		29.29	

Orange 22 November 1903

187	Individuals & Co	66.06	
171	General Expense		66.06
Amount of Cash Disbursements allowed in settlement of Accounts Payable during month of November 1903 as recorded in Cash Book 16 Jan 1904			
187	Individuals & Co	26.25	
187	Individuals & Co	26.25	
4	Bates Accts Bn 26.25		
187	Transf. Notes Payable 26.25		
187	Transf. Notes Payable 26.25		
187	General Expense	100.00	
187	Individuals & Co		100.00
Transferring amount to Bates Extra Expense for month of November 1903 from Bates Accts Bn Ledger to General Ledger			
4	Bates Accts Bn 100.00		
2	Bates Extra Expense 100.00		
1	Securities		
187	Index & Co	97.618.91	
For amount of monies entered in register of Disbursements during month of November 1903 Jan 16 to 16 inclusive and charges as follows:			
171	General Expense	16744.20	
176	Machinery & Tools	66.91	
27	Rail Carriage & Building	441.74	
176	Automobile Account	1351.50	
176	Manufacturing	71463.61	
187	Individuals & Co	49.55	

Orange 21st November 1903

164	Securities		
170	Manufacturing	2627.01	
	Amount of Material Transferred for month of November 1903 as recorded in Register of Disbursement from M. L. & Co. to the factory of the Manufacturing Co.		
171	General Expense	587.55	
172	Machinery & Tools	27	
173	Real Estate & Building	711.50	
174	Manufacturing	2627.01	
	Co.		
175	General Expense	687.55	
176	Real Estate & Building	287.55	
	To correct error in Real Estate Co. Co. 222. amount of this transfer should be \$18.55. \$66.01 was charged to Real Estate & Building instead of General Expense		
	Cash	25.91	
	Misses	109.80	
	Made	21.61	
	W.C.B.	183.09	
	W.C.B.	74.56	
	Trade	25.22	
177	General Expense		
178	Manufacturing	2627.76	
	To correct error in Manufacturing Co. Co. with 277.01 + 277.01 = 277.01 + 277.01 which having been credited to General Expense (which is being accounted) instead of Real Estate	2627.76	
161	Real Estate & Building	2627.76	

Orange 21st December 1903

181	Individuals & Co.		
182	Individuals & Co.		
	To transfer the following accounts		
183	Bates Accts Rec. 97		
184	National Accts Rec. 07		
185	Quality Advertising Co. 36		
186	W. L. & Co. 30		
187	W. L. & Co. 12		
188	Bates Accts Rec. 74		
189	Bates Accts Rec. 74		
190	Individuals & Co.	27.76	
191	Individuals & Co.	27.76	
	Note from Industrial Group Co. dated 22nd Nov at one month payable at Merchants National Bank New York City all money of Industrial Group Co.		
192	Bates Accts Rec. 32.74		
193	Bates Accts Rec. 32.74		
194	Bates Accts Rec. 32.74		
195	Individuals & Co.	44.63	
196	Individuals & Co.	44.63	
	To transfer the following items bill 1800 1895 + 1895 = 1895 from Industrial Group Co. Transfer to Industrial Group Co. 1895		
197	Bates Accts Rec. 44.63		
198	National Accts Rec. 44.63		
199	Bates Accts Rec. 44.63		
200	Individuals & Co.	54.61	
201	Individuals & Co.	54.61	
	To transfer the following accounts		
202	Bates Accts Rec. 54.61		
203	United States Savings Bank 54.61		
204	Bates Accts Rec. 54.61		
205	E. A. Collins 54.61		

Orange N.J. December 1908

[illegible]

Orange, December 1903

187	Individuals Paid		3031
171	General Expenses		9037
	Amount of Cash Payments deducted in payment settlement of Cash Payable during December 1900 as recorded in Cash Book "C" paid to last revenues		
189	Individuals Paid		120422910
✓	Summaries		
	For amount of sales recorded in abstracting sales during month of December 1900 to be added as follows		
171	General Expenses		17927
184	Notes		12642151
175	Manufacturing		17822
✓	Summaries		
189	Individuals Paid		10410871
	Amount of disbursements recorded during month of December 1900 as recorded in Register of disbursements paid at last within charges		
171	General Expenses	2858907	
180	Machinery & Tools	60006	
27	Coal & Lumber Building	26057	
175	Manufacturing	7584485	
189	Individuals Paid	1611	
✓	Summaries		
178	Manufacturing		2501230
	Amount of material disbursements for month of December 1900 as recorded in Register of disbursements paid at last within charges as follows		
171	General Expenses	650081	
180	Machinery & Tools	1100	
27	Coal & Lumber Building	1258	
175	Manufacturing	1867124	

January 31st 1904

191	General Expense		100.00	
192	Transfer account of Bates extra expense for month of January 1904 from Bates Accts Rec to General Expense			100.00
193	Bates extra expense \$100.00			
194	General Expense		57.92	
195	Transfer to Individuals & Co			57.92
196	Amount of Cash & amount returned in prompt settlement of Bates Accts Rec during January 1904 as recorded in Cash Book + 1 balance 6 13 advance			
197	Bates Accts Rec + 57.92			
198	Individuals & Co		57	
199	Transfer to the following accounts			57
200	Bates Accts Rec	4		
201	Bates Accts Rec			
202	General Expense	28		
203	Bank of America	6		
204	Marshall & Co	10		
205	W. H. Thompson	6		
206	Hayward & Hunt & Co	6		
207	W. E. Green	7		
208	Cambridge Printing Co	18		
209	Individuals & Co		123.27	
210	Transfer to the following accounts			123.27
211	Bates Accts Rec	22		
212	Bates Accts Rec	123.27		
213	Bates Accts Rec	4		
214	Bates Accts Rec	5.06		
215	Bates Accts Rec	1.00		
216	Bates Accts Rec	85		
217	Bates Accts Rec	22		
218	Bates Accts Rec	25		

Orange 7th of January 1904

219	Individuals & Co		21.85	
220	Transfer to the following accounts			21.85
221	Cash of Bates	229		
222	W. H. Phone Co	100		
223	J. C. Davidson	211		
224	Bates Accts Rec + 21.85			
225	Machinery & Tools		105.00	
226	Transfer to the following accounts			105.00
227	Transfer to the following accounts			
228	Transfer to the following accounts			
229	Transfer to the following accounts			
230	Transfer to the following accounts			
231	Transfer to the following accounts			
232	Transfer to the following accounts			
233	Transfer to the following accounts			
234	Transfer to the following accounts			
235	Transfer to the following accounts			
236	Transfer to the following accounts			
237	Transfer to the following accounts			
238	Transfer to the following accounts			
239	Transfer to the following accounts			
240	Transfer to the following accounts			
241	Transfer to the following accounts			
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243	Transfer to the following accounts			
244	Transfer to the following accounts			
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276	Transfer to the following accounts			
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289	Transfer to the following accounts			
290	Transfer to the following accounts			
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292	Transfer to the following accounts			
293	Transfer to the following accounts			
294	Transfer to the following accounts			
295	Transfer to the following accounts			
296	Transfer to the following accounts			
297	Transfer to the following accounts			
298	Transfer to the following accounts			
299	Transfer to the following accounts			
300	Transfer to the following accounts			

Orange 22nd January 1904

✓	Dividends		
150	Individuals & Co	7105.46.00	
	Amount of Disbursements cashed during month of January 1904 as recorded in Register of Disbursements folios 176 to 181.		
✓	General Exp. Balance	19,198.89	
151	Machinery & Tools	4,000.77	
152	Coal, Lumber & Building	1,076.26	
153	Furniture & Textures	311.25	
154	Manufacturing	13,042.24	
155	✓	56.54	
✓	✓		
156	Material		
	Amount of Material Transferred for month of January 1904 as recorded in Register of Disbursements folios 176 to 181 inclusive Chicago	18,271.82	
157	General Exp. Balance	46,140.05	
158	Machinery & Tools	17.62	
159	Coal, Lumber & Building	3,989.9	
160	Furniture & Textures	48.34	
161	Manufacturing	13,546.06	

Orange 22nd February 1904

162	Dividends		
163	Individuals & Co	6,018.00	6,018.00
	For a dividend of 125 per share on all stock of the company entitled thereto payable February 22 nd 1904.		
164	Charles. Botcher	245.44.00	210.50
165	Wm. J. A. E. E. E.	20.00	32.50
166	Henry B. Archibald	20.00	312.50
167	John A. E. E. E.	14.00	12.50
168	John J. E. E. E.	24.75.00	212.50
169	John J. E. E. E.	10.00	12.50
170	John J. E. E. E.	5.00	6.25
171	John J. E. E. E.	43.75.00	46.25
172	John J. E. E. E.	2.75	3.75
173	John J. E. E. E.	5.00	6.25
174	John J. E. E. E.	5.00	6.25
175	Bond Interest		
176	Unpaid Bond Interest	100.00	100.00
	Amount of Bond Interest due on coupon 'd. Bonds 2,200, 2,200, 2,200 & 2,200 remaining unclaimed and unpaid. Repay later and subject to clearance.		
	Amount of series # 7000		
	Paid 7,100.00		
177	Individuals & Co		
178	General Expense	102.04	102.04
	Amount of Cash Disbursed deducted by prompt settlement of Cash Payables during February as recorded in Cash Book & General Journal.		
179	Individuals & Co	128.19	
180	Individuals & Co		28.19
	To transfer the following amounts		
	✓ Universal Caster & Foundry Co. 28.19		
	John J. E. E. E. 28.19		

Orange N.J. February 1904

155	Individuals Co	11570.56	
156	Amount of Sales recorded in Abstract of Sales during month of Feb'y 1904 and to be credited as follows		
157	General Expenses	606.29	
158	State	11107.18	
159	221 Manufacturing	37.09	
160	Surplus		
161	Individuals Co	867.07.38	
162	Amount of Surplus made recorded during month of February 1904 in Register of Dividends from 1884 to 1899		
163	Material & Expenses	12201.07	
164	Manufacturing & Tools	882.87	
165	Real Estate & Building	9089.81	
166	Manufacturing	567.00	
167	Manufacturing	64530.79	
168	State	22.45	
169	Surplus		
170	221 Manufacturing	20.47.92	
171	Amount of Material & Expenses for month of February 1904 as recorded in Register of Dividends from 1884 to 1899 as follows		
172	General Expenses	14910.27	
173	Manufacturing & Tools	611.66	
174	Real Estate & Building	5.81	
175	Manufacturing	63.59	
176	Manufacturing	14550.19	

Orange N.J. February 1904

181	Individuals Co	67.08	
182	To transfer the following accounts		67.08
183	8 Manufacture Supply Co	01	Compensation 106
184	Manufacturing	04	Compensation 106
185	M.C. Bine Bros	30	Compensation 106
186	Manufacturing	858	Manufacturing 2101
187	Manufacturing	56.27	Manufacturing 107
188	Profit & Loss		72.57
189	Individuals Co		72.57
190	To write off surplus account for fiscal year ending July 25, 1904		
191	Manufacturing	72.57	
192	Manufacturing	13.57.98	
193	To transfer amount standing to the credit of Manufacturing to the credit of Photograph		
194	Manufacturing	18.28.25	
195	Photograph	18.28.25	
196	Manufacturing		7.11.56
197	General Expenses		7.11.56
198	To transfer amount standing to the credit of Box Factory to the credit of General Expenses		
199	Box Factory	7.11.56	
200	Profit & Loss		287.72.00
201	Surplus		
202	To write off the following accounts		
203	Real Estate		147.00.00
204	Dividend		24572.00

Orange N.J. February 1908

71	Manufacturing	15272.04	
178	Manufacturing	15272.04	
	Transfer to manufacturing preparing water account with through put balance		
17	Photograph 15272.04		
15	Spring water 15272.04		
155	Salts	26910.88	
151	Salts	26910.88	
	To transfer to manufacturing account		
15	Spring water 15272.04		
77	Electric water 15272.04		
103	Water 103.00		
3	Phone 2576.70		
27	Manufacturing 173.50		
71	General Expense	978.63	
149	Salts	978.63	
	To credit Raw Material Sales with amount of 978.63 credited to General Exp. per credit attached		
66	Raw material Sales 978.63		
	Distribution		
	Oil 779.75		
	Gas 83.29		
	Light 75.75		
	Heat 269		
	Wage 2615		
4	Freight		
178	Manufacturing	7159.77	
	Additional amount of material transfer for month of Feb. to be recorded in Department of Distribution for 1908 charged to		
121	General Expense	1706.26	
27	Raw Material Building	7500	
31	Furniture & Fixtures	2307.19	
178	Manufacturing	4870.32	

Orange N.J. February 1908

171	General Expense	1845.10	
178	Manufacturing	1845.10	
	Transfer to make Box Factory account agree with inventory		
161	Box Factory 1845.10		
178	Manufacturing	4686.76	
178	Manufacturing	4686.76	
	Transfer to make preparing account and raw material account equal inventory		
17	Phone 2086.76		
173	Preparing 131.50		
103	Raw Material 4965.36		
180	Machinery & Tools	17.87	
27	Raw Material Building	17.87	
	To correct error in distribution of the following March 1908. Feb 1908 charged to Raw Material Building should be Machinery & Tools		
171	General Expense	20.87	
27	Raw Material Building	20.87	
	To correct error in distribution of the following March March 1908 charged to Raw Material Building should be Machinery & Tools		
	200 19.47		
	201 195		
	202 108		
52	Furniture & Fixtures	122.77	
27	Raw Material Building	122.77	
	To correct error in distribution of the following March March 1908 charged to Raw Material Building should be Furniture & Fixtures		
	219 700		

Orange, N.J. February 1904.

8	Profit & Loss	6472.72
14	Merchandise for sale To write off an old inventory of merchandise	6472.72
178	Merchandise	2699.98
171	To distribute for sale General Expense on the following basis:	2699.98
17	Manufacturing	162.26
31	Auto. Manufacturing Machine	1122.79
113	Tax	1442.24
184	Miscellaneous	1018.80
187	Law Matter	479.45
180	Prof. Kristine's fee	2024.71
137	11a. Carriage	39.80
178	Manufacturing	11627.50
171	To transfer to General Expense of merchandise to Auto. Manufacturing Co. for sale	11627.50
21	Auto. Manufacturing Machine	11627.50
178	Manufacturing	71072
178	Amount charged by Edwin Postland Amount to be repaid to Edwin Postland based on given	71072
178	Miscellaneous	71072
164	Saldo	122,526.18
8	Profit & Loss	122,526.18
178	For Profit realized on the following accounts from first year ending Feb. 29, '09	122,526.18
3	Manufacturing	87,172.00
114	Auto. Manufacturing Machine	15,079.41
66	Auto. Manufacturing Machine	1,327.48
8	Tax	32,973.99
27	Miscellaneous	462.14
104	Law Matter	127.06
33	Prof. Kristine's fee	2238.27
54	Raw Material Saldo	631.08
70	Carriage	2100.45

Orange Nf. Feb 1904

156	<u>Saldo</u>	79		
160			41.069.17	41.069.17
	<u>Individuals</u>			
	To credit National Phone Co. month account			
	Tenneco Chapin's Photograph & Max			
	account equal 50% of Robert's National			
	plus General Expense and representing			
	as per understanding.			
	Debit Mobil & Max 50%			
	Phone	675.06.07	97.42.72	111.06.07
	Max	248.218.82	2.00.00	22.47.00
		92.00.07.31	117.239.07	87.00.00
	Comprehension by the shell phone 100.00.00			
			Max 12.00.00	100.00.00
4	<u>National Phone Co.</u> 41.069.17			
3	Phone	16.00.07		
8	Max	24.00.00		
154	<u>Saldo</u>	79		
175			10.57.01.9.99	10.57.01.9.99
	<u>Manufacturing</u>			
	To transfer cost of sales of the following			
	accounts for fiscal year ending July 27, 1907			
17	Photographs	100.100.00		3
31	Anti-Monopoly Machine	11.00.00		14
117	Beta Manufacturing	1.50.00		66
163	Max	10.00.00		8
163	Miscellaneous	10.00.00		37
180	Tom Motor	2.00.00		106
187	Gray Kinetograph	1.00.00		38
104	Radio National Sales	2.00.00		56
187	Cash	100.00.00		70

Orange 22^g March 1904

185	Individuals & Co	44.55	
188	Individuals & Co	44.55	
	Dr. Drops for the following amounts		
	a.		
✓ 1	Bates Accts. Recd. 100.00	Bates Accts. Recd. 100.00	
101	General Expense	30.00	At B. Washington 100
102	General Expense	15.00	At B. Washington 100
103	General Expense	20.00	At B. Washington 100
104	General Expense	14.00	At B. Washington 100
105	General Expense	80.12	
106	Individuals & Co	80.12	
	Amount of cash disbursements allowed in January, 1904, of Bates Accts. Recd. bearing month of March 1904		
	at second line Cash Book to page 1167		
	a.		
1	Bates Accts. Recd. 100.00		
185	Individuals & Co	20.27	
187	General Expense	20.27	
	Amount of Cash Disbursements deducted at 100.00 at settlement of Bates Accts. Recd. month of March 1904 as recorded in Cash Book to page 1167		
187	General Expense	100.00	
188	Individuals & Co	100.00	
	Transferring amount of Bates Accts. Recd. for month of March 1904 from Bates Accts. Recd. to General Expense		
1	Bates Accts. Recd. 100.00		
2	Bates Accts. Recd. 100.00		

Orange 22^g March 1904

185	Individuals & Co	12.07	28.88
188	Individuals & Co	12.07	28.88
	Amount of Sales for current month as recorded in Abstract of Sales for a day to 1904 both inclusive it is credited as follows		
187	General Expense	67.65	
188	Sales	12.07	28.88
189	Manufacturing	14.70	
1	Individuals & Co		
189	Manufacturing	20.78	17
	Amount of Material charges for month of March 1904 as recorded in Register of Disbursements for month of March 1904		
187	General Expense	61.92	26
188	Manufacturing	8.61	
189	Manufacturing	14.34	10
1	Individuals & Co		
185	Individuals & Co	10.52	1.99
	Amount of Disbursements recorded during month of March 1904 as recorded in Register of Disbursements for month of March 1904 both inclusive charged to		
187	General Expense	22.88	2.9
188	Manufacturing	10.52	1.99
189	Manufacturing	8.61	0.4
1	Individuals & Co	10.52	1.99
185	Individuals & Co	81.75	1.76
189	Manufacturing		

Orange N.J. April 30 - 1904

177	General Expense		100.00	
185	Individuals & Co			100.00
	Transferring amount of Patco Patco Expense for month of April 1904 from Patco Patco Co ledger to General Expense			
1	Patco Accounts Receivable 100.00			
2	Patco Patco Expense 100.00			
186	Individuals & Co		60.36	
179	General Expense			60.36
	Amount of Cash Payments deducted in prompt settlement of Accounts Payable during month of April 1904 as recorded in Cash Book "C" folio 28. 68.00			
177	General Expense		78.45	
185	Individuals & Co			78.45
	Amount of Cash Payments allowed in prompt settlement of Patco Patco Co during month of April 1904 as recorded in Cash Book "C" folio 28. 68.00			
1	Patco Patco Co 78.45			
186	Individuals & Co		98	
185	Individuals & Co			98
	To transfer the following accounts			
1	Patco Patco Co 98	Patco Patco Co		
2	Patco Patco Co	Patco Patco Co		
186	Patco Patco Co	Patco Patco Co		
185	Individuals & Co		20.00	
185	Individuals & Co			20.00
	To transfer the following accounts			
186	Edw O Remington 20.00	Patco Patco Co		
	Edw O Remington 20.00			

Orange N.J. April 1904

188	Individuals & Co			108.967.82
1	Securities			
	Amount of sales for current month as recorded in Abstract of Sales folio 105 & 106 both inclusive to be credited as follows			
177	General Expense			118.58
186	Sales			108.967.82
179	Manufacturing			1.66
188	Individuals & Co			107.872.79
	Amount of Disbursements transferred during month of April 1904 as recorded in Register of Disbursements folio 192 to 202 both inclusive charged to			
177	General Expense			18.141.20
186	Machinery & Tools			2.679.90
179	Real Estate & Building			637.90
27	Furniture & Fixtures			70.00
179	Manufacturing			84.388.16
185	Individuals & Co			49.70
1	Securities			
179	Manufacturing			23.905.19
	Amount of Material Transfers for month of April 1904 as recorded in Register of Disbursements folio 192 plus and charged to			
177	General Expense			1686.55
186	Machinery & Tools			77.29
179	Real Estate & Building			26.13
27	Furniture & Fixtures			5.47
179	Manufacturing			18.179.46

Orange 24.9 May 1904

165	Dividend	20	6015.00	6015.00
166	Individuals & Co			
	For a dividend of 10% per share on all the stock of the company entitled thereto payable May 20, 1904			
167	W. H. B. Baker	248.840	24.88	
168	W. H. B. Baker	446.716	44.67	
169	W. H. B. Baker	250.000	25.00	
170	W. H. B. Baker	250.000	25.00	
171	W. H. B. Baker	250.000	25.00	
172	W. H. B. Baker	250.000	25.00	
173	W. H. B. Baker	250.000	25.00	
174	W. H. B. Baker	250.000	25.00	
175	W. H. B. Baker	250.000	25.00	
176	W. H. B. Baker	250.000	25.00	
177	W. H. B. Baker	250.000	25.00	
178	W. H. B. Baker	250.000	25.00	
179	W. H. B. Baker	250.000	25.00	
180	W. H. B. Baker	250.000	25.00	
181	W. H. B. Baker	250.000	25.00	
182	W. H. B. Baker	250.000	25.00	
183	W. H. B. Baker	250.000	25.00	
184	W. H. B. Baker	250.000	25.00	
185	W. H. B. Baker	250.000	25.00	
186	W. H. B. Baker	250.000	25.00	
187	W. H. B. Baker	250.000	25.00	
188	W. H. B. Baker	250.000	25.00	
189	W. H. B. Baker	250.000	25.00	
190	W. H. B. Baker	250.000	25.00	
191	W. H. B. Baker	250.000	25.00	
192	W. H. B. Baker	250.000	25.00	
193	W. H. B. Baker	250.000	25.00	
194	W. H. B. Baker	250.000	25.00	
195	W. H. B. Baker	250.000	25.00	
196	W. H. B. Baker	250.000	25.00	
197	W. H. B. Baker	250.000	25.00	
198	W. H. B. Baker	250.000	25.00	
199	W. H. B. Baker	250.000	25.00	
200	W. H. B. Baker	250.000	25.00	

Orange 24.9 May 1904

188	Individuals & Co	20.00		
189	General Expense			
190	Amount of Cash Disbursements deducted in prompt settlement of Accounts payable during month of May 1904 as recorded in Cash Book #6 from 21.492 inclusive			
191	General Expense			
192	Individuals & Co	75.69		
193	Amount of Cash Disbursements deducted in prompt settlement of Accounts payable during month of May 1904 as recorded in Cash Book #6 from 21.492 inclusive			
194	Individuals & Co			
195	General Expense			
196	Amount of Cash Disbursements deducted in prompt settlement of Accounts payable during month of May 1904 as recorded in Cash Book #6 from 21.492 inclusive			
197	Individuals & Co			
198	General Expense			
199	Amount of Cash Disbursements deducted in prompt settlement of Accounts payable during month of May 1904 as recorded in Cash Book #6 from 21.492 inclusive			
200	Individuals & Co			
201	General Expense			
202	Amount of Cash Disbursements deducted in prompt settlement of Accounts payable during month of May 1904 as recorded in Cash Book #6 from 21.492 inclusive			
203	Individuals & Co			
204	General Expense			
205	Amount of Cash Disbursements deducted in prompt settlement of Accounts payable during month of May 1904 as recorded in Cash Book #6 from 21.492 inclusive			
206	Individuals & Co			
207	General Expense			
208	Amount of Cash Disbursements deducted in prompt settlement of Accounts payable during month of May 1904 as recorded in Cash Book #6 from 21.492 inclusive			
209	Individuals & Co			
210	General Expense			
211	Amount of Cash Disbursements deducted in prompt settlement of Accounts payable during month of May 1904 as recorded in Cash Book #6 from 21.492 inclusive			
212	Individuals & Co			
213	General Expense			
214	Amount of Cash Disbursements deducted in prompt settlement of Accounts payable during month of May 1904 as recorded in Cash Book #6 from 21.492 inclusive			
215	Individuals & Co			
216	General Expense			
217	Amount of Cash Disbursements deducted in prompt settlement of Accounts payable during month of May 1904 as recorded in Cash Book #6 from 21.492 inclusive			
218	Individuals & Co			
219	General Expense			
220	Amount of Cash Disbursements deducted in prompt settlement of Accounts payable during month of May 1904 as recorded in Cash Book #6 from 21.492 inclusive			
221	Individuals & Co			
222	General Expense			
223	Amount of Cash Disbursements deducted in prompt settlement of Accounts payable during month of May 1904 as recorded in Cash Book #6 from 21.492 inclusive			
224	Individuals & Co			
225	General Expense			
226	Amount of Cash Disbursements deducted in prompt settlement of Accounts payable during month of May 1904 as recorded in Cash Book #6 from 21.492 inclusive			
227	Individuals & Co			
228	General Expense			
229	Amount of Cash Disbursements deducted in prompt settlement of Accounts payable during month of May 1904 as recorded in Cash Book #6 from 21.492 inclusive			
230	Individuals & Co			
231	General Expense			
232	Amount of Cash Disbursements deducted in prompt settlement of Accounts payable during month of May 1904 as recorded in Cash Book #6 from 21.492 inclusive			
233	Individuals & Co			
234	General Expense			
235	Amount of Cash Disbursements deducted in prompt settlement of Accounts payable during month of May 1904 as recorded in Cash Book #6 from 21.492 inclusive			
236	Individuals & Co			
237	General Expense			
238	Amount of Cash Disbursements deducted in prompt settlement of Accounts payable during month of May 1904 as recorded in Cash Book #6 from 21.492 inclusive			
239	Individuals & Co			
240	General Expense			
241	Amount of Cash Disbursements deducted in prompt settlement of Accounts payable during month of May 1904 as recorded in Cash Book #6 from 21.492 inclusive			
242	Individuals & Co			
243	General Expense			
244	Amount of Cash Disbursements deducted in prompt settlement of Accounts payable during month of May 1904 as recorded in Cash Book #6 from 21.492 inclusive			
245	Individuals & Co			
246	General Expense			
247	Amount of Cash Disbursements deducted in prompt settlement of Accounts payable during month of May 1904 as recorded in Cash Book #6 from 21.492 inclusive			
248	Individuals & Co			
249	General Expense			
250	Amount of Cash Disbursements deducted in prompt settlement of Accounts payable during month of May 1904 as recorded in Cash Book #6 from 21.492 inclusive			

Orange N.J. May 1906

✓	<u>Spending</u>		
174	<u>Manufacturing</u>		2a 50.72
	Amount of material transferred for month of May 1941 as shown in report of Disbursement files not to be chargeable to		
177	<u>General Expenses</u>		294.87
57	<u>Real Estate & Building</u>		7.99
57	<u>Furniture & Fixtures</u>		31.08
178	<u>Manufacturing</u>		17,311.78
	<u>11</u>		
183	<u>Individuals Co.</u>		71,754.56
✓	<u>Spending</u>		
	Amount of sales for current month as provided in Abstract of Sales files 889 to 888 both inclusive to be credited as follows:		
175	<u>General Expenses</u>		153.72
176	<u>Machinery & Tools</u>		1.50.00
176	<u>Sales</u>		71,906.68
178	<u>Manufacturing</u>		8.12

Orange N.J. June 1904.

185	Individuals & Cos.			
188	Individuals & Cos.		8.46	
	To transfer the following accounts			8.46
2	National Phone Co.	5.46	Radio Accts. Rec.	4.1
	National Phone Co. 5.46		100.1	
189	Individuals & Cos.			
191	Individuals & Cos.		4.38	
	To transfer the following accounts			4.38
104	Cross Mfg. Co. of N.Y.	4.38	Radio Accts. Rec.	4.1
	Cross Mfg. Co. of N.Y. 4.38		110.1	
192	Individuals & Cos.			
198	Individuals & Cos.		25.00	
	To transfer the following accounts			25.00
1	National Phone Co.	25.00	E.T. Procter	20.00
199	Individuals & Cos.			
200	Individuals & Cos.		20.25	
	To transfer the following accounts			20.25
4	Radio Accts. Rec.	30.25	Radio Accts. Rec.	4.1
110	Cross Mfg. Co. of N.Y.	2.25	Muster & Edmund	110.1
3	Expense	12.00	N.T. Pillsbury & Co.	171.1
201	Individuals & Cos.			
202	Individuals & Cos.		29.38	
	To transfer the following accounts			29.38
1	Account of Cash Disbursements			
	in pamphlet settlement of Radio Accts. Rec.			
	during month of June 1926 as recorded in			
	Cash Book "A" folios 92-99 inclusive			
203	General Expense			
204	General Expense		76.69	
	To transfer the following accounts			76.69
1	Account of Cash Disbursements			
	in pamphlet settlement of Radio Accts. Rec.			
	during month of June 1926 as recorded in			
	Cash Book "A" folios 93 to 98			
	(Radio Accts. Rec. 96.69)			

Orange N.J. June 1904

187	General Expense	100.00	
188	Individuals & Co	100.00	
	Transferring amount of Bates & Co. Extra Expense from Bates & Co. Balance to General Ledger		
	Bates & Co. Receivable 100.00	✓	
	Bates & Co. Expense 100.00	✓	
✓	Summaries		
189	Individuals & Co	87.63.50	
	Amount of Disbursements recorded during month of June 1904 as recorded in Register of Disbursements of Bates & Co. both inclusive charges due to		
189	General Expense	18.79.64	
190	Machinery & Tools	12.84.38	
191	Real Estate & Building	10.33.38	
192	Manufacturing	56.11.8.18	
193	Individuals & Co	10.15.6	
✓	Summaries		
194	Manufacturing	17.55.94	
	Amount of Material Transfers for month of June 1904 as recorded in Register of Disbursements of Bates & Co. both inclusive charges due to		
194	General Expense	3.32.9.15	
195	Machinery & Tools	12.4.64	
196	Real Estate & Building	10.67	
197	Manufacturing	14.00.8.96	
198	Individuals & Co	88.70.1.68	
✓	Summaries		
	Amount of Sales for current month as recorded in Abstract of Sales for 1904 to 1904 both inclusive to be credited as follows		
197	General Expense	6.74.0	
198	Machinery & Tools	8.67	
199	Real Estate	87.88.61	
199	Manufacturing	16.3.18	

Orange N.J. July 1904

193	Individuals & Co	19.00	
198	Individuals & Co	12.00	
	To transfer the following accounts		
4	Bates & Co. Rec. 15.00	Bates & Co. Rec. 11	
111	F. Bogardus	See Consolidated Statement July 1904	
110	Local Merchants of N.Y. 10.00	See 27. Blank	
198	Individuals & Co	90.71	
198	Individuals & Co	90.71	
	Received this day Note from B. B. Haden Printing Co. dated July 6 th & a new payable at Central Savings Bank Co. Toledo Ohio in settlement of their a/c to July 1 st 1904		
11	Bates & Co. Rec. 90.71		
101	Bates & Co. Receivable 90.71		
	Bates & Co. Rec. 90.71	4	
	H. B. B. Haden Printing Co. 90.71	100	
198	Individuals & Co	2.00	
198	Individuals & Co	2.00	
	To transfer the following accounts		
108	Domestic Merchants of N.Y. to Bates & Co. Rec. 11		
	Local Merchants of N.Y. 3.00	110.00	
197	General Expense	15.00	
198	Individuals & Co	12.00	
	Transferring amount of Bates & Co. Extra Expense for month of July 1904 from Bates & Co. Rec. to General Ledger		
	Bates & Co. Rec. 12.00	4	
	Bates & Co. Expense 12.00	✓	
197	General Expense	47.01	
198	Individuals & Co	47.01	
	Amount of Cash Disbursements allowed in prompt settlement of Bates & Co. Rec. during month of July 1904 as recorded in Cash Book to July 20 th 1904 inclusive		
	Bates & Co. Rec. 47.00	✓	

Orange 29 July 1908

198	Individuals & Co.		91.8	
177	General Expense			2.00
	Amount of Cash Received deducted in prompt settlement of Notes Payable during month of July 1908 as recorded in Cash Book & folio 106 & 107 in column 31.			
179	Manufacturing		1.11.00	24
	Amount of Material drawn for month of July 1908 as recorded in Register of Disbursements folio 106 & 107 in column 31.			
179	General Expense		2.32.24	
180	Machinery & Tools		1.84.96	
177	Real Estate & Building		6.35	
177	Manufacturing		8.67.27	
179	Individuals & Co.		149.6.25	78
	Amount of Disbursements bounded during month of July 1908 as recorded in Register of Disbursements folio 106 & 107 in column 31.			
177	General Expense		1.05.29.58	
180	Machinery & Tools		1.84.96	
177	Real Estate & Building		6.35	
179	Manufacturing		8.67.27	
179	Individuals & Co.		37.11.25	
179	Individuals & Co.		6.1.26	
179	Individuals & Co.		67.08.00	
	Amount of Sales for month of July 1908 as recorded in Abstract of Sales folio 107 & 108 both in column 31 to be credited as follows:			
177	General Expense		1.01.82	
177	Sales		26.95.75	
179	Manufacturing		1.01.82	

Orange 29 July 1908

198	Individuals & Co.		6.00.00	
177	General Expense			
	Save this day two Notes to A. Weston & Son @ 90 & 120 days respectively payable at Union National Bank New York 24 p cent interest @ 6% per annum.			
177	Notes Payable		2.00.00	
177	Notes Payable		2.00.00	
177	A. Weston & Son		2.00.00	
177	A. Weston & Son		2.00.00	
177	Individuals & Co.		3.00.00	
177	Notes Payable		07.00.00	
	Save this day one Note @ 60 days payable at Union National Bank New York 24 p cent interest @ 6% per annum.			
177	Union National Bank & Foundry Co. & 3.00.00			
177	Machinery & Tools		1.84.96	
177	General Expense		1.01.82	
	I correct error in distribution R.M. Vanhook & Son may the above item charged to General Expense (Mfgs) instead Machinery & Tools			
177	General Expense		2.90.08	
177	General Expense		2.90.08	
	I correct error in distribution R.M. Vanhook & Son may the above amount charged to General Expense instead Furniture & Fixtures			

Orange N.J. August 1904

193	Bond Interest	7200.00	
194	Michael Bond Interest	7200.00	
	Amount of Bond Interest due this day on coupon # 11		
198	Individuals Co	3000.00	
	Summaries		
	Gave this day to A. Weston & Son two acceptances due Oct 20 & 21 1904 respectively payable to Messrs. Wall Bank, Newark, N.J. bearing interest at 6%		
194	Notes Payable	1000.00	
194	A. Weston & Son 1000.00	1000.00	
9	" " 1000.00		
10	N. J. Receivables	15000.00	
198	Individuals Co	15000.00	
	Received this day Note from National Phonograph Co. due Dec 10 1904 at Union Wall Bank, Newark, N.J.		
2	National Phonograph Co. 15000.00		
19	Notes Receivable	11600.00	
198	Individuals Co	11600.00	
	Received this day Note from Edison Cellulose & Chemical Co. dated Aug. 19 1904 due Dec 20 1904 payable at Franklin National Bank, Philadelphia, Pa.		
15	Edison Cellulose & Chemical Co.		
198	Individuals Co	3000.00	
	Summaries		
	Gave this day two Notes to Bridgeport Brass Co. a five & four months respectively, bearing interest at 6% payable at Union Wall Bank, Newark, N.J.		
194	Notes Payable	1000.00	
194	Bridgeport Brass Co. 1000.00	1000.00	
1	" " 1000.00		

Orange N.J. August

168	Dividends	6018.00	
198	Individuals Co	6018.00	
	For a dividend of 1% payable on all the stock of the company entitled thereby payable August 20 1904		
107	Charles Batchelor	248.40	248.40
108	Mr. L. A. Edison	466.70	466.70
101	Henry B. Hamilton	250.00	250.00
100	Antoine L. Lefebvre	140.00	140.00
1	Thomas A. Edison	279.56	279.56
100	John T. Randolph	10.00	10.00
8	M. B. Silvers	160.00	160.00
105	Oliver J. Mills	500.00	500.00
101	E. M. Morrison	500.00	500.00
	Dividends 2.0		
190	Machinery & Tools	1590.8	
192	General Expenses	139.08	
	To correct errors in distribution R. M. Vander 201 \$ 16.00 May 1904		
	" 201 16.78		
	" 201 96.7		
	" 201 10.10		
	The above amounts were charged to General Expenses (Machinery & Tools)		
179	Manufacturing	3628.86	
179	Manufacturing	3628.86	
	To transfer amount standing to the credit of Phonograph to Phonograph account		
18	Phonograph	3628.86	
194	Notes	6799.18	
194	Notes	6799.18	
	To transfer amount standing to the credit of Spring Motor account to Phonograph account		
16	Spring Motor	6799.18	

Orange 29 August 1904

145	Sales	1855.63	
146	Sales	1028.12	
147	Transfer Spring Motor to Chas. of Spring Motor		
148	Chas. of Spring Motor		
149	Manufacturing	278.80	
150	Manufacturing	278.80	
151	Transfer Spring Motor to Chas. of Spring Motor		
152	Chas. of Spring Motor		
153	General Expenses	122.00	
154	Individuals & Co	122.00	
155	Transfer amount of Bates Co. to Expense for month of August 1904		
156	Bates Co. to Expense		
157	General Expenses		
158	Bates Co. to Expense		
159	Individuals & Co		
160	Manufacturing	16,988.96	
161	Amount of Material transferred for month of Aug. as recorded in Register of Disbursements folios 140 & 141		
162	General Expenses	3,829.95	
163	Machinery & Tools	250.25	
164	Manufacturing	12,808.63	
165	Individuals & Co	21,508.87	
166	General Expenses		
167	Amount of Sales for month of August 1904 as recorded in Abstract of Sales folios 44 & 45 to be credited as follows		
168	General Expenses		
169	Sales	300.80	
170	Manufacturing	22,182.22	
171		129.30	

Orange 29 August 1904

172	Individuals & Co	24,966.55	
173	Amount of Disbursements transferred during August 1904 as recorded in Register of Disbursements folios 6 & 12		
174	General Expenses	18,905.18	
175	Machinery & Tools	2,772.60	
176	Individuals & Co	266.26	
177	Manufacturing	38.26	
178	Individuals & Co	62,664.55	
179	Individuals & Co	2,840.00	
180	General Expenses		
181	Individuals & Co	20.72	
182	Amount of Cash Disbursements allowed in prompt settlement of Bates Co. to Expense during month of August 1904 as recorded in Cash Book #1 folio 181 to 182		
183	Bates Co. to Expense		
184	Individuals & Co	11.48	
185	General Expenses	11.48	
186	Amount of Cash Disbursements deducted in prompt settlement of Bates Co. to Expense during month of Aug 1904 as recorded in Cash Book #1 folio 182 to 183		
187	Individuals & Co		
188	General Expenses		
189	Amount of Cash Disbursements deducted in prompt settlement of Bates Co. to Expense during month of Aug 1904 as recorded in Cash Book #1 folio 183 to 184		
190	Individuals & Co		
191	General Expenses		

Orange N.Y. September 1904

192	Individuals & Co.	49.00		
193	Individuals & Co.	49.00		
Borrow this day note from Valentine Stamp Co. at one month, payable at Merchants National Bank, New Haven, Conn.				
Balance this amount to Sept 1 st 1904				
4	Rotta Accts. Recd.	149.75		
191	Rotta Notes Receivable	149.75		
1	Valentine Stamp Co.	49.75		
4	Rotta Accts. Recd.	149.75		
	do			
195	Individuals & Co.	107.75		
190	Individuals & Co.	107.75		
To transfer the following amounts				
6	Rotta Accts. Recd. 187.4	Rotta Accts. Recd.	4	
192	Morgan, Thos. Acct.	50	C. Marsh.	50
3	Rotta Accts. Recd.	113.9	Edw. Starkins	7
2	"	636	Edw. Starkins Acct.	201
3	Cash Sale	44	Schm. & Co. Office Supply Co.	50
3	"	71	Geo. W. Tuckwell	709
	do			
177	General Expense	1,000.00		
196	Individuals & Co.	1,000.00		
To transfer amount of Rotta Accts. Expense for month of September 1904 from Rotta Accts. Recd. to General Expense				
4	Rotta Accts. Recd.	100.75		
7	Rotta Accts. Expense	100.75		
	do			
177	General Expense	702.25		
193	Individuals & Co.	702.25		
Amount of Cash Disbursements allowed in prompt settlement of Rotta Accts. Recd. for month of September 1904 as recorded in Cash Book # 6 folios 110th 119 both inclusive				
4	Rotta Accts. Recd.	150.75		

Orange N.Y. September 1904

198	Individuals & Co.	116.65	
172	General Expense	116.65	
Amount of Cash Disbursements deducted in settlement of Rotta Accts. Recd. during month of September 1904 as recorded in Cash Book # 6 folios 110th 119			
	do		
198	Individuals & Co.	14210.610	
1	Sundries		
Amount of Cash for month of September 1904 as recorded in Abstract of Cash folios 478 to 480 both inclusive as credited as follows			
172	General Expense	8.60	
180	Machinery & Tools	2.00	
168	Sales	141.95	15
179	Manufacturing	5.00	
	do		
1	Sundries		
198	Individuals & Co.	87.46661	
Amount of Disbursements Voucher during month of September 1904 as recorded in Register of Disbursements folios 12 to 18 inclusive chargeable to			
172	General Expense	1610.670	
190	Machinery & Tools	21.55	11
27	Real Estate Buildings	976.00	
37	Furniture & Fixtures	260.00	
179	Manufacturing	678.13	90
198	Individuals & Co.	154.80	
	do		
1	Sundries		
179	Manufacturing	205.68	38
Amount of Material Transfers for month of September 1904 as recorded in Register of Disbursements folios 12 to 18 inclusive chargeable to			
172	General Expense	597.12	
190	Machinery & Tools	12.19	
27	Real Estate Buildings	1.19	
179	Manufacturing	17.65	127

Orange 27 September 1904

174	Sales	1908-9	
175	Transfers Spring Meter to Change photograph	1908-9	
176	Spring Meter 1908 to Change photograph		
177	Manufacturing	1907-8	
178	Transfers Spring Meter to Change photograph	1907-8	
179	Change 1907 to Spring Meter		
180	General Expense	20-1K	
181	Individuals & Co	20-1K	
I carried over on page 201 the above items to General Expense Co. instead of General Expense under date of Aug. 16, 1904			
1	Became Jan. 30		

Orange 27 October 1904

182	Individuals & Co	12-49	
183	Transfers to following accounts	12-49	
184	Boston Acute Plan	12-49	
185	Adams & Co	10	
186	Ames Cotton Co	09	
187	Ames Hall Bank	10	
188	W. Anderson & Co	30	
189	W. B. B. Co	06	
190	C. K. B. Co	05	
191	Commercial Savings Bank	10	
192	J. C. Davidson	16	
193	King Hardware Co	49	
194	The Mutual of Co	40	
195	Massachusetts Co	01	
196	W. B. M. Co	16	
197	Manufacturing Co	15	
198	W. M. L. Co	28	
199	W. M. L. Co	10	
200	The Mutual of Co	28	
201	W. B. M. Co	08	
202	W. B. M. Co	08	
203	W. B. M. Co	01	
204	W. B. M. Co	01	
205	W. B. M. Co	10	
206	W. B. M. Co	01	
207	W. B. M. Co	10	
208	W. B. M. Co	01	
209	W. B. M. Co	10	
210	W. B. M. Co	01	
211	W. B. M. Co	10	
212	W. B. M. Co	01	
213	W. B. M. Co	10	
214	W. B. M. Co	01	
215	W. B. M. Co	10	
216	W. B. M. Co	01	
217	W. B. M. Co	10	
218	W. B. M. Co	01	
219	W. B. M. Co	10	
220	W. B. M. Co	01	
221	W. B. M. Co	10	
222	W. B. M. Co	01	
223	W. B. M. Co	10	
224	W. B. M. Co	01	
225	W. B. M. Co	10	
226	W. B. M. Co	01	
227	W. B. M. Co	10	
228	W. B. M. Co	01	
229	W. B. M. Co	10	
230	W. B. M. Co	01	
231	W. B. M. Co	10	
232	W. B. M. Co	01	
233	W. B. M. Co	10	
234	W. B. M. Co	01	
235	W. B. M. Co	10	
236	W. B. M. Co	01	
237	W. B. M. Co	10	
238	W. B. M. Co	01	
239	W. B. M. Co	10	
240	W. B. M. Co	01	
241	W. B. M. Co	10	
242	W. B. M. Co	01	
243	W. B. M. Co	10	
244	W. B. M. Co	01	
245	W. B. M. Co	10	
246	W. B. M. Co	01	
247	W. B. M. Co	10	
248	W. B. M. Co	01	
249	W. B. M. Co	10	
250	W. B. M. Co	01	

Orange N.J. October 1904

27	Receipts & Issues	777.82
115	Ratio Payments & Returns	777.82
	To consolidate the above accounts	
110	Manufacturing Rights	29,250.91
	to consolidate the following accounts	
99	New Hope Electric Tools	4477.98
101	Five Water Tools	1360.25
111	Ratio Manufacturing Machine Tools	23,372.68
8	Profit & Loss	69,072.76
11	Graphophone Factory	69,072.76
	To decrease Graphophone Factory account carrying the account on books at a value of one dollar under title of Miscellaneous Assets	
8	Profit & Loss	15,561.25
1	to consolidate the following accounts carrying Ratio Manufacturing	
	to be made at a value of one dollar on the credit under title of Miscellaneous Assets	
95	Ratio Manufacturing in the Stock	14,866.06
97	Ratio Manufacturing in the Stock	13,129.00
		12,520.22
9	Profit & Loss	10,072.71
115	Ratio Payments & Returns	10,072.71
	To decrease Ratio Payments & Returns account carrying the account on the books at a value of one dollar under title of Miscellaneous Assets	
9	Profit & Loss	99,024.64
36	Manufacturing Rights	99,024.64
	To decrease Manufacturing Rights account & amount standing to credit of Profit & Loss	

Orange N.J. October 1904

27	Miscellaneous Assets	3.00
	To transfer the following accounts to Miscellaneous Assets also	
95	Stock Account (Ratio)	1.00
118	Ratio Payments & Returns	1.00
11	Graphophone Factory	1.00

Orange N.Y. November 1904

198	Individuals & Co		110	
199	Individuals & Co			110
	To transfer the following items			
1	Berkshire & Co. St. Lawrence	106		
201	W.H. Thompson	106		
165	Dividend		601.00	
198	Individuals & Co			601.00
	For a dividend of 1% per share on all the stock of the company entered thereto payable November 1st 1904.			
107	Charles Potabaler	218.55		
13	Mr. J. A. Edison	46.75		
101	Amey A. Buchanan	212.50		
100	International Telephone Co	143.00		
1	James A. Edison	225.25		
100	John B. Randolph	10.00		
6	W.B. Gilman	163.00		
104	Oliver J. Wells	5.00		
106	E. M. Morrison	5.00		
	Dividend 1st 21			
195	Individuals & Co		570.75	
198	Individuals & Co			570.75
	To transfer the following accounts			
11	Centers & Co. Supply Co. 100 St. National Bank	7		
198	Individuals & Co		360	
198	Individuals & Co			360
	To transfer the following accounts			
101	National Phone Co	300		
	St. Lawrence Co. 250			
	National Phone Co. 250	107		
195	Individuals & Co		08	
198	Individuals & Co			08
	To transfer the following accounts			
10	Manhattan Bros	01		
	St. Lawrence Co. 01			
	Manhattan Bros 01	103		

Orange N.Y. November 1904

173	General Expense			
198	Individuals & Co		174.00	
	To transfer account of Extra Extra Expense during month of November 1904 from			
4	Bates & Co. 175.00			
2	Bates & Co. Expense	175.00		
173	General Expense			175.00
198	Individuals & Co		175.00	
	Cash Dividends allowed Bates & Co. during month of November 1904 as recorded in Cash Book 1/2 folio 10th 145			
4	Bates & Co. 175.00			
195	Individuals & Co		66.66	
173	General Expense			66.66
	Amount of Cash Dividends deducted in prompt settlement of Bates & Co. during month of November 1904 as recorded in Cash Book 1/2 folio 145 to 146 inclusive			
154	Sales		2894.65	
151	Sales			2894.65
	To consolidate Chase & Spangheller accounts for month of November 1904			
4	Spring Motor 1000 St. Phone	3		
198	Individuals & Co		162.65	
	To transfer of Sales for month of Nov 1904 as recorded in Abstract of Sales folios 145 to 146 both inclusive to be credited as follows			
173	General Expense		12.00	
190	Machinery & Tools		22.50	
27	Real Estate & Building		2.40	
151	Sales		168.75	
179	Manufacturers		100.00	

Orange 27 November 1904

✓	Standard		
198	Individuals & Co		150 192 99
	Amount of Disbursements for month of November 1904 as recorded in Register of Disbursements folios 18 to 22 both inclusive		
	Chargeable to		
172	General Expense	26	216 08
110	Machinery & Tools	6	264 88
27	Real Estate & Buildings	22	26 99
27	Furniture & Fixtures		4 70
120	Manufacturing	118	265 38
198	Individuals & Co		178 6
✓	Green Leaf		
120	Manufacturing	24	285 00
	Amount of Machine Transfer for month of November 1904 as recorded in Register of Disbursements folios 32 along with to		
192	General Expense	6	96 02
110	Machinery & Tools		102 70
27	Real Estate & Buildings	27	6 93
120	Manufacturing	27	046 33
120	Manufacturing	2	877 34
120	Manufacturing		
15	To consolidate the following accounts		24 79 24
	Phone 1477 to Spring Water 157		

Orange Nf December 1904

56	Notes Receivable	12		
199			Individuals Co.	
	2 Credit National Phone Co. with Note dated Dec 12 th 1904 at four month maturity at Union Natl Bank Newark N.J.			1500.00
2	National Phone Co.	1300.00		
56	Notes Receivable	18		
199			Individuals Co.	
	Received this day Note from The Edwin Portland Cement Co. dated December 13 th 1904 due April 29 th 1905 payable at Franklin Natl Bank Toledo Pa			1185.00
5	Edwin Portland Cement Co.	1185.00		
173	General Expenses	31		
195			Individuals Co.	
	Transferring amount of Notes Gibbs Expenses for month of December 1904 from Bate Accts. Rec. Ledger to General Ledger			100.00
4	Bate Accts. Rec.	100.00		
6	Bate Gibbs Expenses	100.00		
198	Individuals Co.			445.00
198			Individuals & Co.	
	To Transfer the above amount from Individuals & Co. Ledger to Bate Accts. Rec. Ledger			445.00
109	Northrup Only Co.	420.00	Bate Accts. Rec.	4
			Northrup Only Co. 420.00	8
193	Individuals & Co.			67.13
193			Individuals & Co.	
	To Transfer the following accounts			67.13
4	Bate Accts. Rec.	67.13	Natl Phone Co.	0.75
107	National Phone Co. Ind. Comm'g	67.13		

Orange, December 1906.

31
170 General Expense

171 Individuals & Co
Amount of Cash Disbursements allowed
in prompt settlement of Bates Accts
for month of December 1906
as recorded in Cash Book #6 folios 151-153

172 Individuals & Co

173 General Expense
Amount of Cash Disbursements deducted
in prompt settlement of Accts Payable
during month of December 1906 as
recorded in Cash Book #6 folios
156 to 163 inclusive

31
170 General Expense

171 Machinery & Tools
To cancel Journal Entry in July 1906
error in distribution of March & 22nd
May in same is corrected by Journal
entry in August
(Chgo. mfg. Co.)

31
170 Individuals & Co

171 Sundry
For amount of Sales for month
of December 1906 as recorded in
Abstract of Sales folios 547 to 570. Total
inclusive to be credited as follows

172 General Expense

173 Sales

174 Manufacturing

31
175 Sales

To consolidate Phone & Spring Motor
accounts for month of December 1906

175 Spring Motor & Phone

70.82

70.82

1670

1670

1400

1400

186,781.94

224.89

186,788.92

178.15

2406.54

2406.54

3

Orange, December 1906.

31
170 Sundry

171 Manufacturing
Amount of Material Transfers for
month of December 1906 as recorded in
Register of Disbursements folio 512-514
Changeable to

172 General Expense

173 Machinery & Tools

174 Real Estate & Building

175 Furniture & Fixtures

176 Manufacturing

177 Manufacturing

178 Manufacturing

179 Manufacturing

180 Manufacturing

181 Manufacturing

182 Manufacturing

183 Manufacturing

184 Manufacturing

185 Manufacturing

186 Manufacturing

187 Manufacturing

188 Manufacturing

189 Manufacturing

190 Manufacturing

191 Manufacturing

192 Manufacturing

193 Manufacturing

194 Manufacturing

195 Manufacturing

196 Manufacturing

197 Manufacturing

198 Manufacturing

199 Manufacturing

200 Manufacturing

37977.40

6906.22

260.12

192.45

123

30616.49

195.42

1954.21

152

165683.36

79,504.84

3446.72

228,509

2507

120,313.90

57.15

Orange 22nd January 1905

149	Individuals & Co	37.90	37.90
149	Individuals & Co		
Received this day from Valentine Stamp Co. of one month payable at Merchants National Bank New Haven Ct. a balance this amount to Dec 1904			
149	Bates Accts Rec	37.90	
149	Bates Accts Payable	37.90	
149	Valentine Stamp Co	37.90	
149	Bates Accts Rec	37.90	
149	General Expense	27.91	27.91
149	Individuals & Co		
Amount of Cash Disbursements allowed in from for settlement of Bates Accts Rec during month of January 1905 as recorded in Cash Book #6 folios 148 to 151 inclusive			
149	Bates Accts Rec	27.91	
149	General Expense	100.00	100.00
149	Individuals & Co		
Transferring amount of Bates Accts Expense for month of January 1905 from Bates Accts Rec ledger to General Ledger			
149	Bates Accts Rec	100.00	
149	Bates Accts Expense	100.00	
149	Individuals & Co	89.50	89.50
149	General Expense		
Amount of Cash Disbursements deducted in from for settlement of Accts Payable during month of January 1905 as recorded in Cash Book #6 folios 148 to 151 inclusive			
149	Sales	294.15	294.15
149	Sales		
To consolidate Phone & Spring Motor accounts for month of January 1905			
149	Spring Motor	294.15	3

Orange 22nd January 1905

149	Individuals & Co	36.51	36.51
149	Individuals & Co		
To transfer the following accounts			
149	Bates Accts Rec	36.51	Bates Accts Rec 4
149	R. D. Coleman	31	Surplus 3
149	Valentine Stamp Co.	10	" 1
149	M. Shafter & Son Co.	77	" 1
149	How Roberts	50	" 1
149	Pringle & Mansfield Book Co.	10	" 1
149	Maxwell Motor Co.	10	" 1
149	Surplus	135	Smith & Thomas 106
149	"	12.00	Bates & Schuman 106
149	Ames & Zepherus Co.	80	Ames & Zepherus Co 106
149	F. J. Blair & Co.	57	Surplus 3
149	H. T. Bookmillers	6.00	" 1
149	Carr Bros	9.58	" 1
149	Citizens Nat Bank	25	" 1
149	Geo. Morris & Son Co.	15	" 1
149	Edwards & Smith Co.	49	" 1
149	Edwards & Smith Co.	41	" 1
149	Reynolds & Sons	35	" 1
149	Sperry & Hapeman	12	" 1
149	Sales		1024.60
149	Sales		1024.60
To correct error in distribution in abstract of Sales of Phone & Spring Motor to R. D. Coleman & Son Co. Canada during month of November & December 1904			
149	Phone	1024.60	
149	Cash	952.7	70
149	Spring Motor	72.01	40
149	Cash	68.22	
149	Geo. Morris & Son Co.	175	116
149	B. Home	297	297
149	19. 27. 11	238	182
149	Spring Motor	2077	72.01

Orange 27 of January 1905

199	Individuals & Co	17480.77
	For amount of Sales for current month as recorded in Abstract of Sales filed 55 to 57 inclusive to be credited as follows	
173	General Expense	78.33
154	Sales	11885.67
179	Manufacturing	586.87
179	Manufacturing	439.98
173	General Expense	639.98
	To correct error in distribution in R.M. Numbers as specified below. The above amount was charged to General Expense (omit) instead of	
163	Wax	439.98
1/4	196 lb. Aluminum	\$7.40
1/4	198 "	78.40
1/4	34 "	1.60
1/4	128 "	47.70
1/4	200 "	116.40
1/4	300 "	117.88
		307.98
✓	Individuals & Co	91378.30
199	Amount of Disbursements for month of January 1905 as recorded in Report of Disbursements filed 42 to 44 inclusive & chargeable to	
173	General Expense	26250.78
190	Machinery & Tools	475.82
28	Rail Cables & Building	10053.26
34	Furniture & Fixtures	62.83
179	Manufacturing	67469.96
199	Individuals & Co	60.10

Orange 27 of January 1905

✓	Individuals & Co	26639.11
179	Manufacturing	
	Amount of Material Transfers for month of January 1905 as recorded in Report of Disbursements filed 45 to 47 inclusive chargeable to	
173	General Expense	4177.32
190	Machinery & Tools	68.33
28	Rail Cables & Building	132.63
34	Furniture & Fixtures	74
179	Manufacturing	27860.09
179	Manufacturing	119.88
179	Manufacturing	1198.48
	To consolidate Spring month & Thom for month of January 1905	
18	Thom	1198.48
	Spring motor 152	

Orange N.J. February 1905

199	Individuals & Co	9	62.00	
199	Individuals & Co			62.00
Received this day Note from Valentine's Stamp Co. & one month payable at the Merchants National Bank New Haven Conn in payment of this December account.				
4	Bates Accts Rec	62.00		
101	Bates Notes Receivable	62.00		
6	Bates Accts Rec	62.00		
1	Valentine's Stamp Co	62.00		
		20		
165	Dividend		601.800	
199	Individuals & Co			601.800
Paid dividend of 1 st per share on all the stock of the company entitled thereto payable February 20 th 1905				
107	Charles Batchelder	248.40 @ 1 st	310.00	
13	Mr Thomas Addison	446.75	583.44	
101	Harvey's Auctioneers	205.000	312.50	
108	International Supply Co	1430.000	1787.50	
1	Thomas Addison	248.200	279.50	
100	John F. Randolph	10.000	12.50	
4	W. B. Sillmore	160.000	200.00	
105	Oliver J. Wells	5.000	6.25	
106	S. M. Harrison	5.000	6.25	
	Dividend # 22			

199	Individuals & Co	28	867	
199	Individuals & Co			867
To transfer the following accounts				
19	J. S. Bank N.Y. Co	6.57		
44	A. A. Meeks	2.00		
1	Bates Accts Rec	8.67		
9	J. S. Bank N.Y. Co	6.57		
	A. A. Meeks	2.00		

Orange N.J. February 1905

199	Individuals & Co	28	1065	
199	Individuals & Co			1065
To transfer the following accounts				
19	National Phone Co	10.65		
4	Bates Accts Rec	10.65		
100	National Phone Co	10.65		
199	Individuals & Co	28	994	
199	Individuals & Co			994
To transfer the following accounts				
4	Bates Accts Rec	994		
3	Swapsman	4.5		
107	International Supply Co	4.5		
107	Ames Wood Working Mfg Co	39		
3	Swapsman	18		
11		53		
11		59		
11		11		
113	General Expense	28	175.00	
199	Individuals & Co			175.00
Transferring amount of Bates Extra Expense for month of July 1905 from Bates Accts Rec to General Expense				
4	Bates Accts Rec	125.00		
7	Bates Extra Expense	125.00		
199	General Expense	28	57.05	
199	Individuals & Co			57.05
Amount of Cash Received allowed in prompt settlement of Bates Accts Rec during month of February 1905 as recorded in Cash Book # 7 Feb. 1 to 7				
4	Bates Accts Rec	57.05		
103	Bond Interest		6900.00	
104	Unpaid Bond Interest			6900.00
Amount of Bond Interest due this day on coupon # 15				

Orange N.J. February 1905

199	Individuals Co	25	
173	General Expense	25.17	25.17
Amount of Cash Disbursements deducted in prompt settlement of Accts Payable during month of February 1905 and recorded in Cash Book #7 folio 157			
199	Individuals Co		
199	Individuals Co	26.2	26.2
To transfer the following amounts			
to			
706	W. Brennan	1.00	106 ✓
706	J. B. Bures	1.00	106 ✓
106	Expense	3.08	John S. Knapp & Sons 2 ✓
106	"	01	Fred. Best Co 2 ✓
706	J. Mullin	1.00	106 ✓
706	John Smith Co	05	106 ✓
706	W. Stieper	1.00	106 ✓
106	Expense	25	W. H. Thompson 101 ✓
106	"	215	W. F. Haden-Wentley 700
50	Philip Snyder	10	Cash Sale 14 ✓
1	Manufacture follows 05	Expense	106 ✓
199	Individuals Co		
199	Individuals Co	27.00	27.00
To transfer the following amounts			
to			
7	Edwin May Co.	27.00	May Wrightman 70
199	Individuals Co		
199	Individuals Co	120.86	120.86
To transfer the following amounts			
to			
4	Bates Auto Rec.	120.86	Bates Auto Rec. 4
3	Expense	27.28	Baldwin Dist. Bates Co. 207
"	"	1.18	Congress Kitchen & Table 219
"	"	1.75	Grant Iron Co. 410
"	"	1.95	J. B. Antleman Co. 217
"	"	74.64	Clark Iron Co. 700

Orange N.J. February 1905

199	Individuals Co	92.4	92.4
199	Individuals Co		
To transfer the following items			
4	Bates Auto Rec.	9.24	Bates Auto Rec. 4
3	Expense	9.24	Carr Bros. 107
199	Individuals Co		
199	Individuals Co	40.66	40.66
To transfer the following amounts			
to			
50	W. H. Williams	46	Cash Sale 14 ✓
7	W. H. Jones Co.	46.00	C. B. Witt 207
8	Profit & Loss	08	
Summed			
To write off the following amounts			
703	Bates Auto Rec.	14.100.00	14.100.00
165	Expenditure account	2407.200	2407.200
199	Manufacturing		
173	General Expense	114.74	114.74
To correct error in distribution on Bates Auto Rec. from 1901 to 1904 27.28 changed to General Expense (Witt) initial Witt			
165	Witt	114.74	
8	Profit & Loss		
199	Individuals Co	29	29
To write off expense amount for fiscal year ending Feb. 28/05			
106	Expense	29	
8	Profit & Loss		
199	Individuals Co	186.17	186.17
To write off amount of Bates expense for fiscal year ending Feb. 28/05			
4	Bates Auto Rec.	186.17	
3	Bates Expense	186.17	

Orange, N.J. February 1905

185	Discontinued Pages	28		415
8	Profit & Loss			415
	2 write off the above amount	28		
186	Sales		2297.86	2297.86
	To consolidate Spring Motor & Phone			
	for month of February 1905			
187	Spring Motor \$292.86 Phone	3		
	Sundries	28		
179	Manufacturing		21799.11	
	Amount of material transferred for month of Feb'y 1905 as recorded in Register of Disbursements July 1905 to 1906 inclusive chargeable to			
178	General Expense		2773.12	
190	Machinery & Tools		140.59	
196	Real Estate & Buildings		5.96	
197	Furniture & Fixtures		643.3	
179	Manufacturing		1681.531	
	Sundries	28		
199	Individuals & Co.		99676.93	
	Amount of Disbursements disbursed during July 1905 as recorded in Reg of Disb July 1905 to 1906 inclusive chargeable to			
198	General Expense		2461.056	
190	Machinery & Tools		477.94	
196	Real Estate & Buildings		453.91	
197	Furniture & Fixtures		405.2	
179	Manufacturing		79924.11	
199	Individuals & Co.		119.69	
8	Profit & Loss	28		
198	Real Estate & Buildings		50000	50000
	Transfer out the old carpenter shop known as building 79 same having been torn down			

173	General Expense	28		
28	Real Estate & Buildings		1000	1000
	to correct error in distribution under "Co. Aug. 1904 same should be charged to R.C. instead of R.C. & B."			
179	Manufacturing		159272	159272
179	Manufacturing			
	to consolidate Phone & Spring Motor accounts for February 1905			
18 Phone	1905 72 Spring Motor	190		
	Individuals & Co.	28		
199	Sundries		13394.30	
	Amount of sales for February 1905 as recorded in Abstract of Sales July 1905 to 1906, to be credited as follows:			
178	General Expense		27698	
190	Machinery & Tools		13366.63	
179	Manufacturing		1069	
	Manufacturing	28		
179	Real Estate & Buildings		30.28	30.28
28	to transfer above amount distributed on transfer 115 July 1905 to R.C. & B. instead of Raw Material			
172	Raw Material	28		
190	Automobile		2001.76	2001.76
173	General Expense			
	to correct error in distribution on transfer 10/19/05 for carrying automobile during same was distributed to General Expense (City) instead Automobile amount			
209	Sales		10673.88	10673.88
209	Phone			
	to credit Phone & Co with amount of scrap sold during fiscal year ending July 26/05			
198	Scrap	10673.88	Phone	3

Orange 22 February 1901

199	Individuals etc	18.00	
173	General Expense	18.00	
	For amount of second distribution for month of February 1901 as recorded in Register of Disbursements folio 54.		
1	Sweden		
174	Manufacturing	13979.62	
	For amount of second distribution for month of February 1901 as recorded in Register of Disbursements folio 54.		
173	General Expense	50.40	
179	Manufacturing	89.49.81	
179	Manufacturing		
173	General Expense	10633.87	
	To transfer expenses directly charged to Bate Manufacturing Co's business		
31	Automatic Sewing Machines	10633.87	
179	Manufacturing	7157.85	
	To transfer amount standing to the credit of Bate Factory to the credit of General Expense		
161	Box Factory	7157.85	
179	Manufacturing		
179	Manufacturing	15105.16	
	To transfer amount standing to the credit of Japanning to the credit of Phone etc		
172	Japanning	15105.16	
180	Manufacturing		
180	Manufacturing	3160.92	
	For amount of third distribution for month of February 1901 as recorded in Register of Disbursements folio 54.		

Orange 22 February 1901

180	Manufacturing		
180	Manufacturing	1767.45	
	To make Raw Material equal inventory		
18	Phone	5867.45	
8	Profit & Loss		
28	Real Estate Building	3244.12	
	To wipe out the portion of Building No 10 which was torn down to make room for New Power House		
8	Profit & Loss		
28	Real Estate Building	2200.00	
	To wipe out Building No 8-12-14-16 same having been torn down		
	Building No 1	153.00	
	" 13	40.00	
	" 14	15.00	
	" 15	45.00	
180	Manufacturing		
173	General Expense	28981.511	
	To distribute pro rata General Expense over the following accounts		
	LTNU	56%	Am't.
18	Photograph	441282.05	33.202
34	Auto W. Machine	29799.24	98.946.08
163	Wax	206535.01	68.575.72
144	Miscellaneous	24350.51	80.61.88
127	Tow Mats	5827.12	11.71.09
170	Tray Liners	13171.16	43.73.18
181	Salvage	124273.77	34.583.20
		272872.17	28981.511

Orange, N.J. February 25/05

1901	Sales	1153209.72
150	Manufacturing	1183209.72
To transfer cost of sales of the following accounts for fiscal year ending July 1905		
8	Photographs	616,616.55 18
15	Auto. M ^{ch}	47,992.59 31
67	Bates Merchandise	2442.70 117
9	Mat	275,955.55 163
91	Miscellaneous	51,527.95 142
106	Faw Motors	35,111.90 134
39	Proj. Kinet	17,153.59 170
57	Material Sales	3251.49 168
70	Cabinet	18,672.67 137
		1153209.72

1901	Sales	1105095.6
199	Individuals & Co.	1105095.6
To credit Nat. Phone Co. with amount of profit on Phone. 77 was accounts equal 10% of Labor Material plus General Expense & Depreciation as per understanding		
	7700 Distributors Nat.	15%
	Phone 711552.50	95236.12 616,616.55 92493.52
	Mat. 229529.20	22953.55 278255.55 41097.83
		1005792.70 115159.54 890602.23 103,890.33

Profits on Photo by Nat. Phone 20581322
 77 was 6606972789000
 7 Credit National Phone Co. 110320.72
 3 Photographs 110320.72
 9 Mat 26953.14

Orange, N.J. February 25/05

1901	Sales	152652.83
8	Profit & Loss	152652.83
To profits realized on the following accounts during fiscal year ending July 25-1905		
3	Photograph	92492.52
9	Mat	41097.83
15	Auto. M ^{ch} Machines	17584.10
17	Miscellaneous	4767.07
39	Proj. Kinet	332.35
57	Material Sales	695.57
67	Bates Merchandise	1143.65
70	Cabinet	3753.38
106	Faw Motors	1115.93

Orange Nj march 1905

173	<u>General Expense</u>		
199	<u>Individuals Co</u>	100.00	100.00
	Transferring amount of Bate Bate Expense for month of March 1901 from Bate Acct Rec ledger to General Ledger		
173	<u>General Expense</u>		
199	<u>Individuals Co</u>	77.60	77.60
	amount of Cash & amount advanced on prompt settlement of Bate Acct Rec during month of March 1901 as recorded in Cash Book of July folio 8 to 11 inclusive		
199	<u>Individuals Co</u>	77.60	
173	<u>General Expense</u>		
199	<u>Individuals Co</u>	15.81	15.81
	amount of Cash & amount deducted on prompt settlement of Accts Payable during month of March 1901 as recorded in Cash Book of July folio 8 to 11 inclusive		
199	<u>Individuals Co</u>	189.48	189.48
173	<u>General Expense</u>		
199	<u>Individuals Co</u>	41.79	41.79
	For amount of Sales during month of March 1901 as recorded in Abstract of Sales folio 25 to 28 and to be credited as follows		
173	<u>General Expense</u>		
199	<u>Individuals Co</u>	516.80	516.80
173	<u>General Expense</u>		
199	<u>Individuals Co</u>	57.72	57.72
173	<u>General Expense</u>		
199	<u>Individuals Co</u>	89.86	89.86
173	<u>General Expense</u>		
199	<u>Individuals Co</u>	25.78	25.78
	Consolidate Spring notes & Phone accounts for month of March 1901		
173	<u>General Expense</u>		
199	<u>Individuals Co</u>	25.78	25.78
	Consolidate Spring notes & Phone accounts for month of March 1901		

Orange 27 March 1905

✓	Sundries	31	
199	Individuals & Co.	129.268.61	
	Amount of disbursements rendered during month of March 1905 as recorded in Register of disbursements filed 55 to be inclusive and charges to		
73	General Expense	20.924.76V	
191	Machinery & Tools	1622.37V	
28	Rail Road & Railroad	212.46V	
37	Furniture & Fixtures	273.08V	
150	Manufacturing	106252.89V	
199	Individuals & Co.	76.55V	
✓	Sundries		
150	Manufacturing	129.958.89	
	For amount of material transferred to Portland during month of March 1905 as recorded in Register of disbursements filed 55 to be inclusive and charges to		
73	General Expense	627.92V	
191	Machinery & Tools	2244V	
28	Rail Road & Railroad	3088V	
37	Furniture & Fixtures	176V	
150	Manufacturing	26619.52V	
150	Manufacturing	26.7276 X	
150	Manufacturing	26.7276 X	
	To credit of Spring Meter & Chemicals for month of March 1905		
19	Phone	269.76 Spring Meter	150

Orange 27 April 1905

56	Notes Receivable	3	
199	Individuals & Co.	1212.00V	1212.00
	Received this day Note from Ed. Edison Portland Cement Co. dated April 23 rd 1905 due Aug 29 th 1905 payable at Franklin Hotel Bank Philadelphia Pa.		
5	Edison Portland Cement Co. \$12.12.00		
199	Individuals & Co.	20	
199	Individuals & Co.	44.55V	44.55V
	Received this day Note from Valentine's Stamp Co. @ one month due May 19, 05 at the Merchants National Bank New Haven Conn. To balance this note March 18 1905		
14	Notes Assets Rec.	44.55V	
101	Notes Notes Receivable	44.55V	
14	Notes Assets Rec.	44.55V	
19	Valentine's Stamp Co.	44.55V	
30			
199	Index & Co.	60V	
199	Index & Co.		60
	To transfer the following accounts		
14	Notes Assets Rec.	60	
20	Lake Shore & Michigan So. Ry. Co. 30 Lake Shore & Mich. So. Ry. Co.		
30	The Portland Chemical Co.	30 The Portland Chemical Co.	
30			
199	Individuals & Co.	344V	
199	Individuals & Co.		344V
	To transfer the following accounts		
14	Notes Assets Rec.	344V	
50	Notes Assets Rec.	69	
7	Notes Assets Rec.	69	
3	Surplus	100	
199	Individuals & Co.	111.1	
199	Individuals & Co.		111.1
	To transfer the following accounts		
5	Edison Portland Cement Co. 111.1		

Orange N.Y. April 30/1905

180	Manufacturing	Debit	57,508.4	
180	Manufacturing	Credit	477.63	
To transfer the following items to Spence Shop Order account				
129	Spence Shop Order	Dr	307.25	148
9	18.10	"	38.08	148
9	18.70	"	74.31	148
9	17.70	"	8.84	148
9	18.26	"	6.31	148
199	Individuals Co	Debit	31,421	31,421
173	General Expense	Credit	31,421	
Amount of Cash Disbursements deducted in prompt settlement of Bate's Accts Rec during month of April 1905 as recorded in Cash Book 47 folios 16 to 21 inclusive				
173	General Expense	Debit	40,000	
199	Individuals Co	Credit	40,000	
Amount of Cash Disbursements allowed in prompt settlement of Bate's Accts Rec for month of April 1905 as recorded in Cash Book 47 folios 16 to 21 inclusive				
4	Bate's Accts Rec	Dr	40.00	
173	General Expense	Credit	10,000	
199	Individuals Co	Debit	10,000	
Transferring amount of Bate's Extra Expense for month of April 1905 from Bate's Accts Rec Ledger to General Ledger				
4	Bate's Accts Rec	Dr	100.00	
4	Bate's Extra Expense	Dr	100.00	
180	Sales	Debit	2,879.16	
199	Sales	Credit	2,879.16	
To consolidate Spring Motor & Phone for month of April 1905				
45	Spring Motor	Dr	2,879.16	
	Phone	Dr		

Orange N.Y. April 1905

199	Individuals Co	Debit	17,445.64	
For amount of bills entered in Abstract of Sales during month of April 1905 and to be entered in ledger				
173	General Expense	Credit	1,371.17	
180	Sales	Debit	17,445.64	
180	Manufacturing	Credit	85.37	
199	Individuals Co	Debit	1,200.63	
Amount of Disbursements transferred during month of April 1905 in Register of Disbursements folios 61 to 67 inclusive chargeable to				
173	General Expense	Credit	27,692.84	
191	Machinery & Tools	Debit	1,000.00	
78	Coal & Oil	Debit	38.25	
37	Freight & Express	Debit	26.01	
180	Manufacturing	Debit	1,015.09	
199	Individuals Co	Credit	61.16	
199	Individuals Co	Debit	20,267.28	
Amount of Material Transferred for month of April 1905 as recorded in Reg. of Disb. folios 61 to 67 inclusive chargeable to				
173	General Expense	Credit	11,888.81	
191	Machinery & Tools	Debit	1,000.00	
180	Manufacturing	Debit	25,116.67	
180	Manufacturing	Credit	1,907.53	
180	Manufacturing	Debit	1,907.53	
To consolidate Spring Motor & Phone for month of April 1905				
19	Phone	Dr	1,907.53	
	Spring Motor	Dr		

Orange 27th May 1900

160	Dividend	20	60.15.00	✓	60.15.00
200	Individuals & Co				
	For a dividend of 15% per share on all the stock of the Company entitled thereto payable May 20 th 1900				
101	Charles Ratchler	1484.40	15%	212.66	✓
113	Mr. L. A. Edison	4667.50	15%	699.12	✓
101	Henry B. Archibald	750.00	15%	112.50	✓
100	International Supply Co	1430.00	15%	214.50	✓
1	Thomas J. Edison	2231.10	15%	334.66	✓
3	John F. Randolph	10000	15%	1500	✓
8	W. B. Edwards	160.000	15%	24000	✓
105	Oliver J. Wallis	5.000	15%	750	✓
106	E. W. Harrison	5.000	15%	750	✓
117	J. P. Schenck	5.000	15%	750	✓
	Dividend * 23				
173	General Expense	31	15000	✓	15000
200	Individuals & Co				
	Transferring amount of Bates & Co Expense from Bates & Co Rec. Ledger to General Ledger				
14	Bates & Co Rec.	15000			✓
✓	Bates & Co Expense	15000			✓
200	Individuals & Co				
200	Individuals & Co				
	To transfer the following amount				
✓	National Phone Co	1.17			✓
	Bates & Co Rec.	1.17	4	✓	
	National Phone Co	1.17	100	✓	
173	General Expense				
200	Individuals & Co				
	Amount of Cash Dividend allowed in settlement of Bates & Co Rec. during month of May 1900 as recorded in Cash Book 27 folios 22 to 29 inclusive				
4	Bates & Co Rec.	572.84	✓	572.84	

Orange 27th May 1900

200	Individuals & Co	31	10.18	✓	10.18
173	General Expense				
	Amount of Cash Dividend debited in settlement of Accounts Payable during month of May 1900 as recorded in Cash Book 27 folios 22 to 29 inclusive				
✓	Dividend				
200	Individuals & Co				
	Amount of Disbursements recorded during month of May 1900 as recorded in Rights of Disbursements folio 28 to 34 inclusive chargeable to				
173	General Expense				
28	Bates & Co Building				24.42.78
191	Machinery & Tools				7.42.41
180	Manufacturing				13.46.50
200	Individuals & Co				84.107.57
					70.57.4
✓	Dividend				
180	Manufacturing				
	Amount of Material Transfers for month of May 1900 as recorded in Rights of Disbursements folio 34 chargeable to				
173	General Expense				
28	Bates & Co Building				58.70.37
191	Machinery & Tools				6.12.4
180	Manufacturing				1.57.4
					19.067.57
✓	Dividend				
200	Individuals & Co				
	For amount of bills entered in Abstract of other folios 200 to 21 inclusive during month of May 1900 and to be credited as follows				
✓	General Expense				5.18.7
✓	Sales				15.54.30
✓	Manufacturing				39.33

Orange May 1905

180	Manufacturing	31	1636.86 X
180	Manufacturing		X 1636.86
	To consolidate Spring Motor & Photo of month of May 1905		
19	Photo	1636.86 Spring Motor	180
209	Sales	"	1336.68 X
209	Sales		X 1336.68
	To consolidate Spring Motor & Photo of month of May 1905		
141	Spring Motor	1336.68 Photo	141

Orange of June 1905

700	Individuals Co	30	
700	Individuals Co		240 V
	To transfer the following accounts		
14	Bates Accts. Rec.	200	Bates Accts. Rec. 4.4
145	Marshall Field & Co.	20	Shropshire 3
6	Insurance House Dept.	240	Office of Insurance 1
700	Individuals Co		20 V
700	Individuals Co		20
	To transfer the following accounts		
14	Bates Accts. Rec.	20	
139	Dr. Shropshire Medical Co	20	
210	Dr. Shropshire Medical Co	20	1
173	General Expenses		60 61 V
700	Individuals Co		60 61
	Amount of Cash Disbursements in prompt settlement of Bates Accts. Rec. during month of June 1905 recorded in Cash Book #7, folio 26 to 28 inclusive.		
14	Bates Accts. Rec.	\$ 60.61	
700	Individuals Co		79 61 V
174	General Expenses		79 61
	Amount of Cash Disbursements deducted in prompt settlement of Bates Payable during month of June 1905 recorded in Cash Book #7, folio 26 to 28 inclusive		
700	Individuals Co		20 15 V
700	Individuals Co		20 15
	To transfer the following amount		
7	Fred Rice	20 15	North Photo Co 21
700	Individuals Co		38 61 V
700	Individuals Co		38 61
	To transfer the above amount		
21	National Photo Co	38 61	Madison & Co 1

June 30/05

170	General Expense	Individuals & Co	10000	✓	10000
	Transferring amount of Bates Extra Expense for month of June 1905 from Bates Extra Rec to General Ledger				
18	Bates Extra Rec	100.00			
✓	Bates Extra Expense	100.00			
✓	Sundries				
180	Manufacturing		✓	13980.37	
	Amount of Material drawn for sundries during month of June 1905 as recorded on form 7-A is likewise chargeable to				
178	General Expense	400.39	✓		
191	Machinery & Tools	1.00	✓		
✓	Real Estate Building	1.00	✓		
180	Manufacturing	14295.38	✓		
✓	Sundries				
180	Individuals & Co		✓	2111.24	
	Amount of disbursements sundries during June 1905 as recorded in Register of Disbursements filed 7-A is likewise chargeable to				
178	General Expense	20.07	✓		
191	Machinery & Tools	38.13	✓		
✓	Real Estate Building	48.61	✓		
30	Furniture & Fixtures	6.00	✓		
180	Manufacturing	70.00	✓		
✓	Individuals & Co	5.45			
180	Manufacturing		✓	1242.77	
180	Manufacturing		✓	1242.77	
	Consolidated Spring Motor & Phone Accounts for month of June 1905				
19	Phone	1943.22	✓		
	Spring Motor				

Orange, June 1905

300	Individuals & Co	30			
✓	Sundries				
	For amount of bills entered in Abstract of Sales filed 5-A to 5-B inclusive during month of June 1905				
178	General Expense		✓	13.58	
189	Sales		✓	80.71	
180	Manufacturing		✓	400.70	
✓	Sundries				
189	Sales		✓	200.19	
189	Sales		✓	200.19	
	Consolidated Spring Motor & Phone Accounts for month of June 1905				
46	Spring Motor	2006.25	✓		
	Phone				

Orange N.J. July 1905

12
General Expense

174
100
A credit Jos Dixon Cunniff Co.
with cash disbursements deducted June 22nd
1905 but not allowed
Joseph Dixon Cunniff Co. 450⁰⁰

100
Individuals Class

174
General Expense
To correct distribution of petty cash
ticket June 27th 1905 transfer 49 from
Joseph Dixon Cunniff Co. 450⁰⁰

100
Individuals Class

174
General Expense
To transfer the following amount from
National Bank to Water Books

174
National Phone Co. 901 Grob Faulkner 704⁰⁰

100
Individuals Class

174
General Expense
To transfer the following amounts
4 Bates Auto Rev 49 Bates Auto Rev
109 Williams Tool Co. 49 Williams Tool Co. 150

174
General Expense

100
Individuals Class
Amount of Cash Disbursements allowed in
prompt settlement of Bates Auto Rev
during month of July 1905 as recorded
in Cash Book July 1905 37 to 43
4 Bates Auto Rev 37⁰⁰

174
General Expense

100
Individuals Class
Transferring amount of Bates Extra
Expense for month of July 1905 from
Bates Auto Rev to General Expense
4 Bates Auto Rev \$100⁰⁰
2 Bates Extra Expense \$100⁰⁰

Orange N.J. July 1905

100
Individuals Class

174
General Expense
For amount of Sales for month of July
as recorded in Abstract of Sales July 1905
and to be credited as follows

174
General Expense

100
Sales
130 Manufacturing
41 Machinery & Tools

100
Sales

100
Sales
To consolidate Spring Motor &
Phone accounts for month of July 1905

45 Spring Motor 1189⁰⁰ Phone 4

100
Individuals Class

174
General Expense
Amount of Cash Disbursements deducted
in prompt settlement of Bates Payable
during month of July 1905 as recorded
in Cash Book July 1905 37 to 43 inclusive

100
Individuals Class

174
General Expense
Amount of Disbursements Vouchered
during month of July 1905 as recorded
in Register of Disbursements folio 91
changeable to

174
General Expense

100
Sales
130 Manufacturing
41 Machinery & Tools
100
Individuals Class

Orange 22nd July 1905

✓ Securities 31
 1900 Manufacturing
 Amount of Material Samplers
 for month of July 1905 as recorded
 in Register of Disbursements
 plus 9% chargeable to
 178 General Expense 4148.78 ✓
 191 Machinery & Tools 59.30 ✓
 71 Real Estate & Building 40.61 ✓
 180 Manufacturing 12888.36 ✓

180 Manufacturing 1154.31 ✓
 180 Manufacturing X 1154.31
 Is consolidated Spring Motor ✓
 19 Phono 1154.31 ✓ Spring Motor 180

Orange 22nd August 1905

180 Bond Interest 3
 1904 Unpaid Bond Interest 6700.00 ✓
 For amount of Bond Interest due
 this day on Coupon # 16 ✓ 6700.00

1900 Individuals & Cos 0
 1900 Individuals & Cos 66.12 ✓
 Received this day Note from Harry Moore
 at 50 Days payable at 52 Rates 5X
 14 in settlement of this up to Aug 1/05 ✓ 66.12

14 Bates Accts. Rec. 66.12 ✓ Bates Accts. Rec. 4
 101 Bates Notes Receivable 66.12 ✓ Harry Moore & Co 117
 51 Notes Receivable 21
 1900 Individuals & Cos 1240.00 ✓
 Note dated August 16th 1904 due
 December 29th 1905 payable at
 Franklin Natl Bank Phila Pa
 15 Edison Portland Cement Co #1240.00 ✓

168 Dividend 3
 1900 Individuals & Cos 601.80 ✓
 For a dividend of \$1.25 per share on all
 the stock of the company entitled thereto
 payable Aug 21 1905
 102 Chas. Batchelor 245.00 ✓ Chas 310.75
 113 Wm. A. Edison 446.75 ✓ " 782.50
 106 Henry B. Amherst 220.00 ✓ " 315.00
 100 International Telephone Co 1430.00 ✓ " 1787.50
 1 Thomas A. Edison 2201.00 ✓ " 2787.50
 3 John B. Randolph 10.00 ✓ " 12.50
 8 W. C. Gilman 163.00 ✓ " 203.75
 105 Alvin J. Mills 5.00 ✓ " 6.25
 106 Edw. J. Harrison 5.00 ✓ " 6.25
 117 John R. Selous 5.00 ✓ " 6.25

180 Sales 31
 1904 Sales 1989.26 X
 Is consolidated Spring Motor & Phonos for month of August 1905
 180 Spring Motor 1989.26 ✓ Phonos 4

Orange 29 August 1905

174	General Expense	31	42804	
700	Individuals & Co			4080
	For amount of Cash Disbursements allowed in prompt settlement of Bates Accts Payable during month of August 1905 as recorded in Cash Book #7 folio 48 to 57 inclusive.			
✓ 11	Bates Accts Rec	# 48 to 52		
174	General Expense	31	175004	
700	Individuals & Co			121500
	Transferring amount of Bates Accts Expense for month of August 1905 from Bates Accts Rec to General Ledger.			
✓ 14	Bates Accts Rec	120-02		
✓ 15	Bates Accts Expense	125-74		
700	Individuals & Co	31	60004	
700	Individuals & Co			6000
	To transfer cash charged to Mallory for May Co. shoes have been charged to Thomas A. Edison as per check May 26-1905			
✓ 1	Thomas A. Edison	# 60-78 Mallory for May Co. shoes		
700	Individuals & Co	"	371184	
174	General Expense			37118
	Amount of Cash Disbursements deducted in prompt settlement of Accounts Payable during month of August 1905 as recorded in Cash Book, folio 48 to 57, is closing.			
700	Individuals & Co	"	109208344	
	The amount of sales during month of August 1905 as recorded in Abstract of Sales folio 59, and to be credited as follows.			
174	General Expense		1	72761
19	Machinery & Tools		✓	171840
109	Sales		✓	111044636
150	Manufacturing		✓	1809

Orange 29 August 1905

180	Manufacturing	31		
180	Manufacturing			1046684
	To consolidate Spring Motor & Phonograph for month of August 1905			
✓ 19	Phono	104668 Spring Motor	105	104668
✓ 200	Individuals & Co			111107793
	For amount of bills rendered during month of August 1905 as recorded in Register of Disbursements folio 93 to 100, chargeable to			
174	General Expense			20055661
19	Machinery & Tools			2682661
28	Railroads & Building			70775
31	Furniture & Fixtures			49164
150	Manufacturing			8529644
200	Individuals & Co			22604
✓ 180	Manufacturing			2790147
	For amount of Raw Material rendered during month of August 1905 as recorded in Register of Disbursements folio 93 to 100, chargeable to			
174	General Expense			8257574
19	Machinery & Tools			2891
28	Railroads & Building			6501
150	Manufacturing			18906311

Orange 22 Sept 1905

700 Individual & Co	276.08	
700 To transfer the following accounts	276.08	
70 Joseph Riley 30.00 Cash Sale	14	
70 State of Maryland 1.00 Entry of 1st of 1st	107	
700 Maryland Bridge & Structures 11.00 New York Bridge	206	
700 Bridge	206	
70 44. R. T. Tidner	206	
70 6.41 W. Simpson	206	
70 Cash Sale 30.00 Cash Sale	207	
70 M. Smith 95 Cash Sale	14	
700 A. Mayging 25	14	
700 Maryland Bridge & Structures 12.47	14	
700 Indiv & Co	12.4	
700 To transfer the following accounts	12.4	
70 Bates Accts Rec 12.4 Bates Accts Rec	14	
70 City of New York 12.4 City of New York	14	
700 Indiv & Co	12.4	
700 To transfer the following accounts	12.4	
70 Madison & Co 1.75 Bates Accts Rec 1.75	14	
70 Madison & Co 1.75	106	
700 General Expense	100.00	
700 Transferring amount of Bates Accts Expense	100.00	
70 for month of September 1905 from Bates Accts		
70 Rec to General Exp		
70 Bates Accts Rec # 100.00	14	
70 Bates Accts Expense # 100.00		
700 Manufacturing	19.4	
700 General Expense (copy)	19	
70 Current error in distribution		
70 May 1905 No 277		
700 Special Shop Order 1.00	14	
700 " " 1.00	14	

Orange 22 Sept 1905

700 General Expense	31.35	
700 Account of Cash Disbursements allowed Bates	31.35	
700 Accts Rec for prompt settlement of		
700 accounts during month of September 1905		
700 as recorded in Cash Book # 31.35 inclusive		
700 Bates Accts Rec # 31.35	14	
700 Individual & Co	708.29	
700 General Expense	708.29	
700 For amount of Cash Disbursements deducted		
700 in prompt settlement of Accts Payable		
700 during month of September 1905 as recorded		
700 in Cash Book # 708.29 inclusive		
700 Individual & Co	1405.66	
700 Sundries	1405.66	
700 For amount of bills entered in Abstract		
700 of Sales during month of September 1905		
700 as recorded on Sales # 1405.66 bill inclusive		
700 and to be credited as follows		
700 General Expense 1405.66	1405.66	
700 Sales 1405.66	1405.66	
700 Manufacturing 1405.66	1405.66	
700 Indiv & Co	57.90	
700 To transfer National Phone Co. A. P. M. Bill	57.90	
700 No 277		
700 Maryland Bridge & Structures Jan. 1905	57.90	
700 National Phone Co. 57.90		
700 Manufacturing	68.00	
700 General Expense	68.00	
700 To correct error in distribution of April		
700 books & statement having been		
700 distributed to L. O. R. instead of Special		
700 Shop Order # 1403		
700 Special Shop Order (1903) # 6.35		

Orange 22^d September 1905

✓ 169 Sales

Sales

To consolidate Spring motor & Phone ops for month of September 1905

✓ 170 Spring motor 208.88 Phone 4

✓ 180 Manufacturing

Manufacturing

To charge office ship order account with amount of 700 sq ft 4th box 200 sq ft of 1/4" box and 50 lbs of 1/4" nails some having been used to make 200 small traps on per of 1st Order #1466

✓ 180 Special Ship Order #1466 \$16.33 Box Factory 16.33

✓ 180 Manufacturing

General Expense (Misc)

✓ 174 To correct error in distribution of office order #17 amount charged to P.O. #1466 distributed to 1st Misc instead of special ship order

✓ 180 Special Ship Order #1466 \$3.33

✓ 180 Sundries

Individuals

✓ 170 amount of Invoice vouchers for month of September 1905 as recorded in Register of Disbursements folios 104 to 109 inclusive chargeable to

✓ 174 General Expense

✓ 174 Machinery & Tools

✓ 174 Real Estate & Bldg

✓ 174 Furniture & Fixtures

✓ 180 Manufacturing

✓ 180 Individuals

208.598 X
X 15.51916.30 X
X 16.303.00 X
1 3.00

1.16725380

2202.9164
4689.564
1.5844
127.124
120.796354
62.614Orange 22^d September 1905

✓ 180 Manufacturing

30

To consolidate Spring motor & Phone ops for month of September 1905

✓ 180 Phone 1141.07 Spring motor 150

✓ 180 Sundries

Manufacturing

Account of Material Invoices for month of September 1905 as recorded in Register of Disbursements folios 104 to 109 inclusive chargeable to

✓ 174 General Expense

✓ 174 Machinery & Tools

✓ 174 Real Estate & Buildings

✓ 180 Manufacturing

1141.07 X
X 1141.07

130777.86

791.684
150.4
724
25859.164

Orange N.J. October 1905

180	Manufacturing	220X	
180	Manufacturing	X	220
	To transfer amount charged on error to Spring Motor & on June oucher, #286		
140	Spec. Shop Order	250	19
	as	31	
✓	sundries		
180	Manufacturing	✓ 1229.78	
	Amount of Material delivered for month of October 1905 as recorded in Receipts of Disbursements folio 119 charged to		
174	General Expense	925.13 ✓	
180	Manufacturing	9187.91 ✓	
191	Machinery & Tools	6072.4	
✓	sundries		
960	Individuals & Co.	✓ 18824.92	
	For amount of Disbursements recorded during month of October 1905 as recorded in Receipts of Disbursements folio 119 charged to		
174	General Expense	2955.28 ✓	
191	Machinery & Tools	787.26 ✓	
65	Base Estate & Sundries	1280 ✓	
180	Manufacturing	1781.107 ✓	
100	Individuals & Co.	8701.4	
180	Manufacturing		
180	Manufacturing	11268.62 ✓	
180	Manufacturing	X	11268.62
	To consolidate Spring Motor and Phone 96's for month of October 1905		
19	Phone	1526.75	16
	as	Spring Motor	
100	Individuals & Co.	651	65
100	Individuals & Co.		
	To transfer the following amounts or		
✓	National Phone Co.	65	65
	65 John Country	60	

Orange N.J. October 1905

174	General Expense	100.00 ✓	100.00
200	Individuals & Co.	✓	
	Transferring amount of Batic Batic Expense for month of October 1905 from Batic Batic Ac. to General Ledger		
4	Batic Batic Rec.	100.75	
7	Batic Batic Expense	100.75	
	31		
174	General Expense	757.76 ✓	757.76
200	Individuals & Co.	✓	
	For amount of Cost Overhead allowed Batic Batic Rec'd during month of October 1905 as recorded in Cost Book 7 folio 19 to 26 inclusive		
4	Batic Batic Rec.	75.75	
	"		
200	Individuals & Co.	898.70 ✓	898.70
174	General Expense	✓	
	Amount of Cost Overhead deducted in prompt settlement of Accts Payable for month of October 1905 as recorded in Cost Book 7 folio 19 to 26 inclusive		
100	Individuals & Co.	1075.2964	
✓	sundries		
	For amount of bills entered in Abstract of Sales during month of October 1905 as recorded on folio 602 to 607 inclusive and to be credited as follows		
174	General Expense	✓ 207.86	
200	Sales	✓ 1197.80492	
180	Manufacturing	✓ 18	
	"		
200	Sales	2717.1538	
200	Sales	X 2717.1538	
	To consolidate Spring Motor & Phone 96's for month of October 1905		
100	Spring Motor	2717	4
	as	Phone	

Orange 29 October 1905

760	Individuals Co	31		10 62 1/2	
760	Individuals Co			10 62 1/2	
	To transfer the following accounts				
	to	C ₁			
4	Bate Accts Rec	10 62 1/2	Bate Accts Rec	✓	
117	To Customers Co	1 95	Supplies	3	
3	Supplies	8 67	W. F. Branger	114	

Orange 29 November 1905

160	Dividend	20			
201	For a dividend of 15% per share on all the stock of the company entitled thereto payable November 29 1905			6018 00 ✓	6018 00
15	Charles Patchelor	2464 75		✓	
13	Mrs. Thomas Alderson	1461 75		✓	
116	Henry B. Washburn	246 00		✓	
3	International Supply Co	1430 00		✓	
1	Thomas Alderson	2231 20		✓	
8	John L. Randolph	10 00		✓	
8	Mrs. Alderson	163 00		✓	
105	Oliver J. Wells	5 00		✓	
106	J. M. Morrison	5 00		✓	
17	John L. Schumaker	5 00		✓	
	Dividend 25				
174	General Expense	29		175 00 ✓	175 00
761	Individuals Co			✓	
	Transferring amount of Bate Extra Expense for month of November 1905 from Bate Accts Rec to General Ledger				
4	Bate Accts Rec	125 00			
4	Bate Extra Expense	125 00			
174	General Expense			5204 1/2 ✓	5204 1/2
761	Individuals Co			✓	
	Amount of Gen'l. Expense allowed Bate Accts Rec during month of November 1905 for prompt payment of Dividend as recorded in Cash Book No 7 folio 67 to 76 inclusive				
4	Bate Accts Rec	5204 1/2			
190	Manufacturing			1707 60 X	1707 63
190	Manufacturing			X	
	To consolidate Spring Motor & Horse for month of November 1905				
	to	C ₁			
19	Horse	1707 53	Spring Motor	16	

Orange 24 November 1905

701	Individuals & Co.	1061624
174	General Expense	✓ 1061624
Amount of Cash Disbursements debited in front settlement of accounts payable during month of November 1905 as recorded in Cashbook 71 folio 47 to 75		
✓	Sundries	
180	Manufacturing	✓ 4016385
Amount of Material Transfer for month of November 1905 as recorded in Register of Disbursements folios 124 to 125 inclusive chargeable to		
174	General Expense	10049584
180	Manufacturing	34610974
✓	"	
1401	Sundries	
1401	Individuals & Co.	✓ 1771304
Amount of Disbursements recorded during month of November 1905 as recorded in Register of Disbursements folios 124 to 125 inclusive chargeable to		
174	General Expense	30211084
1401	Machinery & Tools	2061604
180	Manufacturing	14477544
1401	Individuals & Co.	82294
180	Manufacturing	177818
✓	Sundries	
To correct error in distribution of October March 1905 amounts chargeable to Ship Order 1291-1292-1293 distributed to Special S.O., above be as follows		
180	Manufacturing	X 2270
174	General Expense	✓ 14491
✓	"	
140	Special Ship Order 127 1/2	
150	Miscellaneous 77.70	
1291 - S.E. Meier		
1292 - " Moller		
1293 - " Moller		

Orange 24 November 1905

201	Individuals & Co.	30
201	Individuals & Co.	7494
To transfer the following amounts		
✓	"	7494
4	Tower Mfg. Co.	749
	Batter Accts Recd.	4
	Tower Mfg. Machinery Co.	749
201	Individuals & Co.	192506484
✓	Sundries	
For amount of Sales during month of November 1905 as recorded in Abstract of Sales folio 617 to 629 inclusive and to be credited as follows		
174	General Expense	1 6736
701	Sales	✓ 192506430
180	Manufacturing	✓ 282
✓	"	
701	Sales	780239X
701	Sales	X 280239
To creditate Spring Motor Phone for month of November 1905		
✓	"	
4	Spring Motor 280 1/2	Phone 4

Orange 29 December 1905

1	Manufacturing	
117	Account of Material Expenses for month of December 1905 as recorded in Register of Expenditures folios 117 to 138 and charged to	4,453.57
117	General Expense	11,157.06
117	Manufacturing	34,704.01
117	Manufacturing	1,089.00
117	Manufacturing	1,089.00
117	To credit with Spring Motor 100.00 for month of December 1905	
117	Phone 100.00 Spring Motor No.	
117	Individuals & Co	11,037.97
117	General Expense	11,037.97
117	Amount of Cash Disbursements deducted in prompt settlement of accounts payable during month of December 1905 as recorded in Cash Book No. 7 folios 76 to 83 inclusive	
117	General Expense	79,191
117	Individuals & Co	79,191
117	Amount of Cash Disbursements allowed in prompt settlement of Bates Accts Rec during month of December 1905 as recorded in Cash Book No. 7 folios 76 to 83 inclusive	
117	Bates Accounts Receivable 79.2%	
117	General Expense	100,000
117	Individuals & Co	100,000
117	Transferring amount of Bates Extra Expense for month of December 1905 from Bates Accts Rec to General Expense	
117	Bates Extra Expense 100.00	
117	Bates Accts Rec 100.00	

Orange 29 January 1906

201	Individuals & Co	
201	To charge the following items	4,156.1
11	Bates Accts Rec 4,156	4,156
3	Shoppers 189	217.1
"	" 60	50
"	" 16	214
"	" 15	50
"	" 49	3,005
"	" 60	50
"	" 10	101.4
"	" 134	704
"	" 13	108
"	" 30	203
137	Bankers Life Assn 10	3
208	C. P. Brown 16	
208	Alameda Publy Co 05	
208	Carroll Accts Co 49	
208	Commercial Insurance Co 05	
214	Department of Interior 10	
214	Engineering and Surveying Co 05	
215	Barry & Burton 01	
215	Richard Sengler Co 04	
215	E. B. Wright 2	
215	Hamilton Drug Co 10	
215	Kelly & Jones 20	
215	Edw. W. Lickman 15	
215	B. K. Lawrence 10	
215	Madison Apple Corp Station 20	
215	E. C. Madison 17	
215	Meriden Savings Bank 20	
215	Meriden Savings Bank 05	
215	Shoppers Publy Co 20	
215	John W. Kelly Co 26	
215	Geo. W. Tolbot 28	
215	Jules Computing Scale Co 49	
215	University of Arizona 20	
215	U. S. Rubber Co 18	
215	Washington University Co 18	
215	National Bank of Chicago 60	
215	Dr. J. J. C. 01	
215	Shoppers 31.25	200

Orange 27 of January 1906.

31
 174 General Expense Individuals & Co.

201 Amount of Cash Disbursements allowed in prompt settlement of Bates Accts Rec during month of January 1906 as recorded in Cash Book, folios 84 to 91. Debit
 Bates Accts Rec 47 40/100

174 General Expense Individuals & Co.

201 Transferring amount of Bates Accts Rec for month of January 1906 from Bates Accts Rec to General Ledger
 Bates Accts Rec 125 7/100
 Bates Extra Expense 125 7/100

1 Sundries
 211 Manufacturing

201 To cancel Keweenaw Journal Entry covering errors in distribution of Col voucher # 438.

211 Manufacturing

174 General Expense

180 Miscellaneous

140 Species Ship Order

1889 S.E. Mice
 1891 " Mice
 1899 " Mice

201 Individuals & Co.

174 General Expense

201 Amount of Cash Disbursements allowed in prompt settlement of accounts Payable during month of January 1906 as recorded in Cash Book, folios 94 to 99. Debit

47 40/100

47 40/100

175 00/100

125 70/100

X 177 01

2290 X

1549 1/100

997 154

997 1/100

Orange 29 of January 1906.

1 Sundries

211 Manufacturing

201 To correct errors in distribution of Collier Voucher # 438 amounts chargeable to Ship Order 1889 - 1891 - 1893 - 1899

211 Manufacturing

174 General Expense

180 Miscellaneous

140 Species Ship Order

1892 Mice
 1889 S.E. Mice
 1891 " Mice
 1899 " Mice

211 Manufacturing

201 Manufacturing

To cancel Journal Entry Ship Order # 1900 charging \$50.00 with lumber and nails amounting to \$16 3/4

161 Box Factory

1 Sundries

211 Manufacturing

201 Amount of Material Transferred from Store during month of January 1906 as recorded in Register of Disbursements folios 140 - 149 note chargeable as follows

174 General Expense

191 Machinery & Tools

208 Real Estate & Building

211 Manufacturing

211 Manufacturing

To cancel Spring Motor & other the funds of Jan 1906

19 Phone

X 177 81

2290 X

1549 1/100

16 00 X

X 16 00

141,539 12

8168 76 1/100

703 1/100

1278 1/100

3365 1/100

1523 86 X

X 1523 84

Orange J. January 1906

1	<u>Summary</u>	31	
201	<u>Individuals</u>		4757.79
	Amount of Disbursements recorded during month of January 1906 as recorded in Register of Disbursements follows		
174	General Expense	3453.65	
191	Machinery Tools	4049.80	
28	Rail Route Building	147.89	
37	Furniture & Fixtures	403.44	
14	Automobile Account	3000.00	
174	Manufacturing	132187.70	
201	<u>Individuals</u>	53184	
201	<u>Individuals</u>	31	15631189.1
	Summary		
	Amount of Bills entered in Abstract of Sales during month of January 1906 and to be credited as follows.		
174	General Expense	15511	
209	Sales	15607520	
174	Manufacturing	1979	
209	Sales	163578	
209	<u>Sales</u>	X 163578	
	To candidate Spring Motor & Phone also for month of January 1906		
	H. Spring Motor 1635.78 Phone 4		
201	<u>Individuals</u>	204	
201	<u>Individuals</u>	20	
	To transfer the following accounts		
17	National Phone Co. 20 Cypri & Fall	204.1	
201	<u>Individuals</u>	47324	
201	<u>Individuals</u>	47324	
	To transfer the above item		
1	Batter Accts Re	47324	
104	Lord Advertising Agency	47324	

Orange J. January 1906

201	<u>Individuals</u>	31	
201	<u>Individuals</u>		424
	To transfer the above item		424
1	Batter Accts Re	424	
201	J. W. Cranstoun	424	
201	<u>Individuals</u>		624
201	<u>Individuals</u>		62
	To transfer the following accounts		
1	Batter Accts Re	62	
104	Quinnville Nashville R.R.	14	
204	J. W. Cranstoun	50	
	La Moore	50	
	Argy. Argentin	50	

Orange N.J. February 1906

Individuals & Co.		Individuals & Co.	
701	To transfer the above amount see our		
701	list May 2, 1905 & our account books		
17	P.B. Williams & Son Co. 240 Gray St. 548.25		
16	P.B. Williams & Son Co. 548.25		
28			
701	Personal Expense	750.00	✓
701	Individuals & Co.	750.00	✓
To transfer amount of above entry for amount of July 1906			
from this account to General ledger			
750.00			
750.00			
Total Personal Expense			
28			
701	Individuals & Co.	750.00	✓
701	Individuals & Co.	750.00	✓
To transfer the following items to General Exp.			
701	J.A. Abraham	50	
701	J. Angelmann	1.00	
701	Chas. H. Barnes	75	
701	C. J. Ferguson	66	
701	H. Hall	50	
701	Henry Johnston	50	
701	for office & supplies	65.20	
701	for insurance due Co.	35	
701	for paper & ink	40	
701	for postage	17	
701	"	1.31	
701	"	10	
701	"	125	
701	"	25	
701	Personal Expense	750.00	✓
701	Individuals & Co.	750.00	✓
To transfer amount of above account allowed in prompt			
settlement of above account payable for amount of July 1906			
as recorded in bank book & July 2, 1906			
for above payable			
701	Individuals & Co.	750.00	✓
701	Individuals & Co.	750.00	✓
To transfer the day note from Williams & Son Co. to General Exp.			
made 7/1/06 & for 750.00			
to transfer of this to July 1906			
for above payable			
for above payable			
for above payable			
for above payable			

Orange, N. J. February 1906.

701	Individuals Recs				468.8
91	91	Individuals Recs			468.8
7	Trans for following accounts:				
7	National Thrift Co	456	J. Peter Thompson Co	101	
701	Individuals Recs				476.6
91	91	Individuals Recs			476.6
108	Trans for following accounts:				
108	Wichita Automobile Co	476	Wichita Automobile Co of 108	108	
701	Individuals Recs				281.55
91	91	Individuals Recs			281.55
	Trans for the following items representing advances due against the Chicago City National Bank				
	as per by us Sept 25, 1906				
	All the above papers concerning the same				
	are attached to Voucher No. 100, February 1906				
106	Chicago City National Bank	25.78			
	Mr. Board	115.55	704		
	Mr. Board	75.55	704		
	Mr. Keith	85.55	704		
701	Individuals Recs				160
91	91	Individuals Recs			160
	Trans for the following amount from National				
	to C. D. Cook				
7	National Thrift Co	1.50	H. O. Madden	707	
		20			
105	Dividend				601800
701	Individuals Recs				601800
	Div. dividend of 1.35 per share on all the stock				
	of the company entitled to be payable May 25, 1906				
70	Wm. Caperton	70.00	Share	70.00	
10	Wm. A. Adams	16.75	Share	16.75	
10	Wm. A. Adams	25.00	Share	25.00	
3	Wm. A. Adams	14.00	Share	14.00	
1	Wm. A. Adams	22.51	Share	22.51	
3	John F. Pennington	10.00	Share	10.00	
3	W. E. Lawrence	16.00	Share	16.00	
10	Wm. A. Adams	5.00	Share	5.00	
10	Wm. A. Adams	5.00	Share	5.00	
17	Wm. A. Adams	5.00	Share	5.00	
17	Wm. A. Adams	5.00	Share	5.00	

Orange N.J. February 1906

703	<u>Bond Interest</u>	66,000.00	
705	<u>Repaid Bond Interest</u>	66,000.00	
	For amount of Bond Interest due this day or before 7		
8	<u>Profit & Loss</u>	46,394	
701	<u>Individuals & Co's</u>	46,394	
	Expense off amount of Bonds Suspense for		
	final after ending February 28th 1906		
	46.39 Bonds Accrual Principal 41		
	46.39 Bonds Suspense 3		
701	<u>Individuals & Co's</u>	107,569.4	
701	<u>General Expense</u>	107,569.4	
	For amount of cash balance deducted		
	in prompt settlement of amounts Payable		
	during month of February 1906		
1	<u>Landries</u>		
701	<u>Manufacturing</u>	42,993.84	
	For amount of material transferred for		
	month of February 1906 as recorded in		
	Register of Disbursements Feb. 15 and		
	charges to follow		
701	<u>General Expense</u>	98,129.4	
701	<u>Machinery & Tools</u>	667.4	
701	<u>Real Estate & Building</u>	36,882.4	
701	<u>Manufacturing</u>	30,140.85	
1	<u>Landries</u>		
701	<u>Individuals & Co's</u>	4,170,057.71	
	For amount of balance for month of		
	February 1906 as recorded in Register of		
	Disbursements Feb. 15 to 15 and		
	charges to		
701	<u>General Expense</u>	21,999.41	
701	<u>Machinery & Tools</u>	5,270.80	
701	<u>Real Estate & Building</u>	4,310.89	
701	<u>Manufacturing</u>	12,642.06	
701	<u>Individuals & Co's</u>	19,754	

Orange N.J. February 1906

701	<u>Manufacturing</u>	28	
701	<u>Manufacturing</u>	12-08 75.4	
	To consolidate Spring Motor and Phone		
	accounts for month of February 1906		
17	<u>Phone</u>	1208.65	
	Spring Motor 1900th Phone 15		
701	<u>Sales</u>	28	
701	<u>Sales</u>	19,002.26	
	To consolidate Spring Motor & Phone		
	accounts for month of February 1906		
	Spring Motor 1900th Phone 14		
701	<u>Individuals & Co's</u>	205,646.68	
	<u>Landries</u>		
	Amount of Sales for month of February		
	1906 as recorded in Abstract of Sales		
	Feb. 15 to 15 - total amount to be		
	credited as follows		
701	<u>General Expense</u>	29,54	
701	<u>Sales</u>	12,000.89	
701	<u>Manufacturing</u>	7,546.68	
701	<u>Individuals & Co's</u>	20,251	
8	<u>Profit & Loss</u>	20,251	
	To write off Suspense account for		
	year ending February 28-1906		
701	<u>Suspense</u>	20.25	
8	<u>Profit & Loss</u>	37,572.00	
	<u>Landries</u>		
	To write off the following accounts		
701	<u>General Expense</u>	12,072.00	
701	<u>Bond Interest</u>	13,500.00	

Range of J. February 1906

91 ¹¹ Manufacturing	28	1141.8	1141
General Service & Repairs			
To correct distribution of January but try as follows:			
140 Special Ship Order No. 1144			
(\$50.00)			
91 ¹¹ Manufacturing	28	944.85	944.85
Manufacturing			
To correct distribution of 1905 Order No. 1144			
as follows:			
140 Special Ship Order No. 1144			
(\$50.00)			
68	7.84		
77	13.20		
80	11.50		
163	3.60		
70	8.50		
11	3.40		
17	2.50		
27	3.90		
91 ¹¹ Manufacturing	28	128.25	128.25
General Service & Repairs			
To correct distribution of 1905 Order No. 1144 as follows:			
140 Special Ship Order No. 1144			
(\$50.00)			
1515	.26		
1540	2.60		
1549	.06		
1566	99.60		
1568	16.80		
1577	.18		
1589	1.41		
1622	.57		
1623	.20		
1624	4.50		

Range of J. February 1906

91 ¹¹ Manufacturing	28	145	150.98
General Service & Repairs			
To correct distribution of January but try as follows:			
140 Special Ship Order No. 1144			
(\$50.00)			
91 ¹¹ Manufacturing	28	150	150
Manufacturing			
To correct distribution of 1905 Order No. 1144			
as follows:			
140 Special Ship Order No. 1144			
(\$50.00)			
1515	.26		
1540	2.60		
1549	.06		
1566	99.60		
1568	16.80		
1577	.18		
1589	1.41		
1622	.57		
1623	.20		
1624	4.50		
91 ¹¹ Manufacturing	28	145	150.98
General Service & Repairs			
To correct distribution of 1905 Order No. 1144 as follows:			
140 Special Ship Order No. 1144			
(\$50.00)			
1515	.26		
1540	2.60		
1549	.06		
1566	99.60		
1568	16.80		
1577	.18		
1589	1.41		
1622	.57		
1623	.20		
1624	4.50		
91 ¹¹ Manufacturing	28	145	150.98
General Service & Repairs			
To correct distribution of 1905 Order No. 1144 as follows:			
140 Special Ship Order No. 1144			
(\$50.00)			
1515	.26		
1540	2.60		
1549	.06		
1566	99.60		
1568	16.80		
1577	.18		
1589	1.41		
1622	.57		
1623	.20		
1624	4.50		

Orange, N.J. February 1906

-25-			
I. General			
Manufacturing		714	X 25369.73
The amount of Special Ship Orders (not detailed above) originally charged to General Ship Order No. 1 and now transferred as follows:			
15 General Expense		37042.24	
16 Manufacturing		58725.54	
17 Shipping Tools		3225.15	
18 Ballistic Weights		7109.22	
19 Sundries - Sundries		1153.24	
21			
160 Miscellaneous	\$ 517.64		
161 Postage	38.04		
162 Telephone	4.80		
163 Cable	66.51		
164 Shipping Materials	23.57		
165 Engravings	22.30		
25369.73 Special Ship Order No.		160	

Detail			
161	Shipping Tools	61.44	26.64
162	Telephone	36.40	16.24
163	Cable	66.51	26.54
164	Shipping Materials	23.57	32.56
165	Engravings	22.30	37.82
166	Sundries - Sundries	1153.24	12.82
167	Shipping Tools	61.44	21.34
168	Telephone	36.40	26.56
169	Cable	66.51	66.52
170	Shipping Materials	23.57	31.00
171	Engravings	22.30	12.60
172	Sundries - Sundries	1153.24	12.82
173	Shipping Tools	61.44	21.34
174	Telephone	36.40	26.56
175	Cable	66.51	66.52
176	Shipping Materials	23.57	31.00
177	Engravings	22.30	12.60
178	Sundries - Sundries	1153.24	12.82
179	Shipping Tools	61.44	21.34
180	Telephone	36.40	26.56
181	Cable	66.51	66.52
182	Shipping Materials	23.57	31.00
183	Engravings	22.30	12.60
184	Sundries - Sundries	1153.24	12.82
185	Shipping Tools	61.44	21.34
186	Telephone	36.40	26.56
187	Cable	66.51	66.52
188	Shipping Materials	23.57	31.00
189	Engravings	22.30	12.60
190	Sundries - Sundries	1153.24	12.82
191	Shipping Tools	61.44	21.34
192	Telephone	36.40	26.56
193	Cable	66.51	66.52
194	Shipping Materials	23.57	31.00
195	Engravings	22.30	12.60
196	Sundries - Sundries	1153.24	12.82
197	Shipping Tools	61.44	21.34
198	Telephone	36.40	26.56
199	Cable	66.51	66.52
200	Shipping Materials	23.57	31.00

Orange, N.J. February 1906

-25-			
I. General			
Manufacturing		714	X 25369.73
The amount of Special Ship Orders (not detailed above) originally charged to General Ship Order No. 1 and now transferred as follows:			
15 General Expense		37042.24	
16 Manufacturing		58725.54	
17 Shipping Tools		3225.15	
18 Ballistic Weights		7109.22	
19 Sundries - Sundries		1153.24	
21			
160 Miscellaneous	\$ 517.64		
161 Postage	38.04		
162 Telephone	4.80		
163 Cable	66.51		
164 Shipping Materials	23.57		
165 Engravings	22.30		
25369.73 Special Ship Order No.		160	
Detail			
161	Shipping Tools	61.44	26.64
162	Telephone	36.40	16.24
163	Cable	66.51	26.54
164	Shipping Materials	23.57	32.56
165	Engravings	22.30	37.82
166	Sundries - Sundries	1153.24	12.82
167	Shipping Tools	61.44	21.34
168	Telephone	36.40	26.56
169	Cable	66.51	66.52
170	Shipping Materials	23.57	31.00
171	Engravings	22.30	12.60
172	Sundries - Sundries	1153.24	12.82
173	Shipping Tools	61.44	21.34
174	Telephone	36.40	26.56
175	Cable	66.51	66.52
176	Shipping Materials	23.57	31.00
177	Engravings	22.30	12.60
178	Sundries - Sundries	1153.24	12.82
179	Shipping Tools	61.44	21.34
180	Telephone	36.40	26.56
181	Cable	66.51	66.52
182	Shipping Materials	23.57	31.00
183	Engravings	22.30	12.60
184	Sundries - Sundries	1153.24	12.82
185	Shipping Tools	61.44	21.34
186	Telephone	36.40	26.56
187	Cable	66.51	66.52
188	Shipping Materials	23.57	31.00
189	Engravings	22.30	12.60
190	Sundries - Sundries	1153.24	12.82
191	Shipping Tools	61.44	21.34
192	Telephone	36.40	26.56
193	Cable	66.51	66.52
194	Shipping Materials	23.57	31.00
195	Engravings	22.30	12.60
196	Sundries - Sundries	1153.24	12.82
197	Shipping Tools	61.44	21.34
198	Telephone	36.40	26.56
199	Cable	66.51	66.52
200	Shipping Materials	23.57	31.00

Range. N.Y. February 28th 1906

	<u>Account</u>	
3	transfers of sales of the following accounts for the fiscal year ending July 28, 1946:-	
14	Photographs	64.053.670
15	Auto numbering machines	51.493.532
67	Stamps & dice	1.502.711.8
9	Notes	333.466.841.64
71	Miscellaneous	23.777.721.80
107	Raw cotton	2.538.561.86
39	Projecting Knives & spo	22.129.461.71
57	Raw Material Sales	3.304.261.68
70	Gabruin	259.542.313
		<u>1,532,006,654</u>

109	Salles		192546.32
8		<u>Profit Loss</u>	192546.32
	In profits realized on the following accounts		
	during the fiscal year ending July 28th 1906.		
x	Biograph	\$ 124,108.00	
9	Mos	53,020.00	
15	Auto Stenograph Machines	12,528.81	
77	Stenographers	47,416.68	
39	Geo. Heister's	913.44	
56	Material Sales	936.04	
67	Cashier's	24,114.53	
70	Cashier's	3,361.94	
107	Stenographer	254.21	
		<u>\$ 192,546.32</u>	

8	Cash on hand			
	Manufacturing Payroll	39	1,857,548.44	
	Draws Manufacturing Payroll to loan balance of 200			4,155,548.44
9	Miscellaneous Assets			
	Manufacturing Payroll	39	100	
	To consolidate the above accounts			100

Orange, N. J. January 25th 1906

6	<u>Paper^d & L.</u>				\$90 yd.	
7	Turn off the following accounts	Individuals Rep			\$80 yd.	\$80 yd.
		for				
	3.2. ⁴⁸ Etten Rusted Hmby				3	
	728 ^c " " "					

Orange, Ct. March 3, 1906

1	Individuals		
169	Individuals	127653845	
	For amounts of disbursements incurred during month of March 1906 as recorded in Register of Debits & Credits folios 166 to 168, and also charged as follows:		
170	General Expense	46196.94	
171	Machinery Costs	10803901	
172	Real Estate Buildings	995601	
173	Insurance - Fire	1877951	
174	Manufacturing	221595251	
175	Individuals	607761	
1	Individuals		
176	Manufacturing	✓ 5505212	
	For amounts of materials transferred during month of February 1906 as recorded in Register of Debits & Credits folios 168 and charged as follows:		
177	General Expense	10824794	
178	Real Estate Buildings	501	
179	Manufacturing	44203884	
180	Manufacturing	2570292	
181	Manufacturing	2570292	
	to credit balance Spring Notes - Phonograph Co. for month of March 1906:		
182	Phonograph	257822	
183	Individuals		
	For amounts of bills entered in Sales Abstract during month of March 1906 and to be credited as follows:		
184	General Expense	1	3490
185	Sales	420811546	
186	Sales	2477038	
187	Sales	2477038	
	to credit balance Spring Notes - Phonograph Co. for month of March 1906:		
188	Spring Motor	2477038	
189	Phonograph	4	

Orange, Ct. March 3, 1906

170	General Expense		
171	Individuals	12500 ✓	
	to transfer amount of Debits General Expense month of March 1906 from Debits Abstract folios 169 to 170:		
172	General Expense	12500	
173	Individuals		
174	General Expense	1010324	
175	General Expense	1	1010324
	Amount of cash discounts allowed by us in prompt settlement of accounts payable month of February 1906 as recorded in Cash Book folios 101 to 105:		
176	General Expense		
177	Individuals	4688	
178	General Expense		
179	Individuals	4688	
	Amount of cash discounts allowed in prompt settlement of Debits Accounts Receivable month of March 1906 as recorded in Cash Book folios 105 to 109:		
180	General Expense	7438	
181	Individuals		
182	General Expense	10431	
183	Individuals	✓ 10431	
	Amount of cash discount allowed in prompt settlement of Individuals Debits accounts month of March 1906 as recorded in Cash Book folios 109 to 110:		
184	Individuals		
185	Individuals	1711	
186	Individuals	✓ 1711	
	To transfer the following amounts:		
187	Debits Accounts Receivable	171	Debits Accounts Receivable
188	Debits Accounts Receivable	101	Debits Accounts Receivable
189	Debits Accounts Receivable	50	Debits Accounts Receivable
190	Debits Accounts Receivable	101	Debits Accounts Receivable
191	Debits Accounts Receivable		
192	Individuals	17261	
193	Individuals	✓ 17261	
	To transfer the following accounts:		
194	A. A. Wake Mfg. Co.	1726	Debits Accounts Receivable
195	A. A. Wake Mfg. Co.	1726	Debits Accounts Receivable

Orange N.J. March 27th 1906

101	Manufacture & Co	101	Manufacture & Co
101	To transfer the following amounts:	101	
1	Cash Acct. Rec. 11.36	Cash Acct. Rec. 11.36	✓
3	Expense 9.24	Manufacturing 9.24	101
101	Manufacturing School 27	Manufacturing School 27	101
3	Expense 1.75	Manufacturing School 1.75	101

11.36

11.36

Orange N.J. April 27th 1906

1	Manufacture	101	Manufacture & Co
1	To amount of monies received during month of April 1906 as received on the Register of Manufactures filed May 27 th 1906 and to be charged as follows:	101	✓ 42097.18 1/2
175	Manufacturing School	30262.99	
191	Manufacturing School	4525.42	
75	Manufacturing School	462.28	
101	Manufacturing School	196276.42	
101	Manufacturing School	5276.1	

1	Manufacture	101	Manufacture & Co
1	To amount of material transfer received during month of April 1906 as received on the Register of Manufactures filed May 27 th 1906 and to be charged as follows:	101	✓ 42206.09
175	Manufacturing School	2115.03	
191	Manufacturing School	10.11	
75	Manufacturing School	462.28	
101	Manufacturing School	40031.61	

101	Manufacture	101	Manufacture & Co
101	To amount of material transfer received during month of April 1906 as received on the Register of Manufactures filed May 27 th 1906 and to be charged as follows:	101	✓ 385.26
175	Manufacturing School	385.26	
191	Manufacturing School	10.11	
75	Manufacturing School	462.28	
101	Manufacturing School	40031.61	

101	Manufacture	101	Manufacture & Co
101	To amount of material transfer received during month of April 1906 as received on the Register of Manufactures filed May 27 th 1906 and to be charged as follows:	101	✓ 19692.18 1/2
175	Manufacturing School	30262.99	
191	Manufacturing School	4525.42	
75	Manufacturing School	462.28	
101	Manufacturing School	196276.42	
101	Manufacturing School	5276.1	

101	Manufacture	101	Manufacture & Co
101	To amount of material transfer received during month of April 1906 as received on the Register of Manufactures filed May 27 th 1906 and to be charged as follows:	101	✓ 362.79
175	Manufacturing School	362.79	
191	Manufacturing School	10.11	
75	Manufacturing School	462.28	
101	Manufacturing School	40031.61	

Orange N. J. April 24, 1906.

146 General Expense	Individuals Lbs	70 ^v	4210.54	✓	4210.54
Amount of Cash disbursements received in settlement of accounts during April 1906, in accordance with Cash 7. 1906 (log 4 116 - Johnson)					
	1155 Peter Oscar Giovanni	11			
147 Individuals Lbs	General Expense	17 ⁵	1542.20	✓	1542.20
Amount of Cash amount deposited in settlement of accounts April 1906 as received in Cash Book 7. 1906 (log 4 116 - Johnson)					
148 General Expense	Individuals Lbs	70 ^v	467.84	✓	467.84
Transfer of Cash P. S. Williams Cash Co. Toronto, Canada with 100 Cash disbursements in Cash purchase disbursements in settlement of the day					
	467 P. S. Williams Cash Co.	16	✓		
	30				
149 General Expense	Individuals Lbs	70 ^v	1010.00	✓	1010.00
Transfer for amount of Cash, Cash Expense for month of April 1906 from Cash Book No. 7. 1906 (log 4 116 - Johnson)					
	1000 Cash Book No.	4	✓		
	1000 Cash Book Expense	7			
150 Individuals Lbs	Individuals Lbs	70 ^v	79.25	✓	79.25
Transfer for the following 70 ^v 79.25					
✓ 1 Orange disbursements	75	✓			
✓ 70 ^v General Expense	General Expense	70 ^v	110	✓	
70 ^v 30	Individuals Lbs	70 ^v	17.5	✓	17.5
Transfer for the following 70 ^v 17.5					
✓ 1 Cash Book No.	17.5	✓			
101 The Standard Agency	17.5	✓			
	17.5	✓			

Orange N. J. April 30, 1906.

70 Individuals Lbs	Individuals Lbs	70 ^v	193.50	✓	193.50
Transfer for the above amount, posted to P. S. Williams Cash Book, April 30, 1906, in accordance with the Cash Book 7. 1906 (log 4 116 - Johnson)					
✓ 16 P. S. Williams Cash Co.	193.50	✓			
	193.50	✓			

Orange, N.J. May 31, 1906

✓ <u>Indebtedness</u>	<u>Individuals & Cos</u>	42290.22
707	For amount of disbursements rendered during the month of May 1906 as recorded in Register of Disbursements, folios 141-145 & 156, and chargeable as follows:	
705	<u>General Expense</u>	392.75
706	<u>Advertising Costs</u>	99.75
707	<u>Post Office Postage</u>	10.41
708	<u>Telephone Expenses</u>	2.25
709	<u>Manufacturing</u>	199.15
710	<u>Individuals & Cos</u>	10.11
✓ <u>Indebtedness</u>	-31-	
711	<u>Manufacturing</u>	4649.50
712	For amount of material furnished rendered during the month of May 1906 as recorded in the Register of Disbursements, folios 156, and chargeable as follows:	
713	<u>General Expense</u>	226.75
714	<u>Advertising Costs</u>	36.39
715	<u>Post Office Postage</u>	5.45
716	<u>Manufacturing</u>	441.52
✓ <u>Indebtedness</u>	-31-	
717	<u>Manufacturing</u>	30339.28
718	For amount of Spring Water and Photographic accounts, month of May 1906:	
719	<u>Photographic</u>	3.53
720	<u>Individuals & Cos</u>	18220.47
✓ <u>Indebtedness</u>	<u>Liabilities</u>	
721	For amount of bills entered in Sales Abstract for month of May 1906 and to be credited as follows:	
722	<u>General Expense</u>	40.48
723	<u>Sales</u>	418.31
724	<u>Manufacturing</u>	5.51
✓ <u>Indebtedness</u>	-31-	
725	<u>General Expense</u>	1022.41
726	Amount of cash amount rendered in prompt payment of amounts payable for month of May 1906 as recorded in Cash Book, folio 177, 1st Schedule:	1022.41

Orange, N.J. May 31, 1906

727	<u>General Expense</u>	81.95
728	<u>Individuals & Cos</u>	8.70
729	Amount of cash disbursements allowed in prompt settlement of Sales Accounts payable month of May 1906, as recorded in Cash Book, folios 177-181 Schedule:	
730	<u>General Expense</u>	31
731	<u>Individuals & Cos</u>	57.1
732	Transfer for the following accounts:	
733	✓ <u>Post Office Postage</u>	1.1
734	✓ <u>Lower Life Extension Co.</u>	1
735	<u>General Expense</u>	57.63
736	<u>Individuals & Cos</u>	57.63
737	To credit of R.D. Williams \$100 by former balance with 2% cash discount on purchase of securities in securities received this day:	
738	<u>R.D. Williams</u>	16.1
739	<u>General Expense</u>	-31-
740	<u>General Expense</u>	1250.00
741	Transfer amount of Sales Extra Expense for month of May 1906 from Sales Abstract to Cash Book:	
742	<u>Sales Extra Expense</u>	2
743	<u>Sales Extra Expense</u>	-31-
744	<u>Individuals & Cos</u>	640.00
745	<u>Individuals & Cos</u>	640.00
746	Transfer for the following accounts to rectify error in posting in Sales Abstract:	
747	✓ <u>Edison Electric Company</u>	7.1
748	<u>Edison Electric Company</u>	-31-
749	<u>Individuals & Cos</u>	44.4
750	<u>Individuals & Cos</u>	44.4
751	Transfer for the following amount from abstract to Cash Book:	
752	<u>Postage</u>	25
753	<u>Postage</u>	20
754	<u>Postage</u>	7.00
755	✓ <u>National Bank</u>	100.1

Orange N. H. May 21st 1906

160 Dividends
707

Individuals & Co's

To a dividend of \$1.25 per share on all the stock of
the company out of the thirty payable May 21st 1906
(Dividends 27)

by		
✓ Chas. Appleton	288440 share @ 1.25	360550
✓ Mrs. Geo. A. Adams	406750	508437
✓ Mary A. Appleton	250000	312500
✓ International Telephone Co.	143000	178750
✓ Mrs. A. Adams	2221200	277650
✓ Mrs. J. B. Appleton	10000	1250
✓ Mrs. C. Adams	163000	203750
✓ Oliver Wells	5000	62500
✓ J. H. Morrison	5000	62500
✓ John R. Appleton	5000	62500

6018000

1 6018000

Orange N. H. June 2nd 1906

✓ Dividends

Individuals & Co's

The amount of bills rendered during month of June 1906 as
received in Office of Individuals & Co's 151-196 Am. and
charged as follows:

175 General Expenses	37835.48
78 Real Estate Buildings	115920.44
191 Machinery Tools	30909.35
34 Furniture Fixtures	3083.31
192 Automobiles	100000.00
193 Manufacturing	180360.79
707 Individuals & Co's	60300.00

✓ Dividends

Manufacturing

Amount of bills rendered during month of
June 1906 as received in Office of Individuals & Co's 151-196 Am. and
charged as follows:

175 General Expenses	216650.41
191 Machinery Tools	140500.00
78 Real Estate Buildings	60500.00
34 Furniture Fixtures	77.00
193 Manufacturing	339250.81
707 Manufacturing	53170.64
707 Manufacturing	53170.64

To dividends Spring Meeting & June 1st month of June 1906
20000000

707 Individuals & Co's 1846619.51

The amount of bills rendered in Abstract of Sales for month
of June 1906 and to be charged as follows:

175 General Expenses	1100
709 Sales	1153309.36
707 Manufacturing	32218.00

175 General Expenses 821.20

Amount of cash received on prompt payment of
bills rendered for month of June 1906 as received in bank book
of June 1st 1906

821.20

Orange, N.J. July 1906

107	Individuals to whom	100	✓	100
107	to transfer following accounts			
	to			
✓	Auto Accts Rec	100		
107	Chas H. Shook Co	100		Chas H. Shook Co 711
107	Individuals to whom	76.55	✓	76.55
107	to transfer the following accounts			
	to			
107	C. H. Hodge	21.55		Nell H. Hodge Co ✓
110	Chas H. Shook Co	200		Chas H. Shook Co 200
115	Individuals to whom	72.88	✓	72.88
115	to transfer the following accounts			
	to			
✓	Auto Accts Rec	72.88		Auto Accts Rec ✓
51	Auto Accts Rec	2.50		Auto Accts Rec ✓
115	J. Ruggie & Co	2.15		J. Ruggie & Co 104
115	Auto Accts Rec	9.50		Auto Accts Rec 51
115	Auto Accts Rec	117.12		Auto Accts Rec 53
✓	Jefford & Son	100		Jefford & Son 104
115	Auto Accts Rec	1.75		Auto Accts Rec 50
50	Auto Accts Rec	7.50		Auto Accts Rec 103
115	Auto Accts Rec	1.75		Auto Accts Rec 50
115	Individuals to whom	200.44	✓	200.44
✓	to amount of bills entered in Sales Abstract during month of July 1906 and to be credited as follows:			
115	General Expense	81.18		81.18
115	Sales	120.50		120.50
115	Manufacturing	1.56		1.56

Orange, N.J. July 1906

1	Individuals to whom	1239.77	✓	1239.77
108	to amount of bills entered during July 1906 as recorded in Register of Disbursements folios 198 to 207 and chargeable as follows:			
115	General Expense	3233.17		3233.17
115	Real Estate & Building	1305.54		1305.54
115	Machinery & Tools	750.50		750.50
115	Furniture & Interiors	289.55		289.55
115	Automobiles	90.00		90.00
115	Manufacturing	183.15		183.15
115	Individuals to whom	509.31		509.31
115	General Expense	88.34		88.34
115	Individuals to whom	1099.10		1099.10
115	to amount of cash disbursements allowed for prompt payment of Auto Accts Rec for month of July 1906 as per Cash Book by folios 135 to 142 and			
✓	to			
✓	Auto Accounts Rec	88.34		88.34
115	Individuals to whom	1099.10		1099.10
115	General Expense	1099.10		1099.10
115	to amount of cash disbursements allowed for prompt payment of accounts for month of July 1906 as per Cash Book by folios 135 to 142 and			
✓	to			
✓	Individuals to whom	1542.50		1542.50
115	Manufacturing	1542.50		1542.50
115	to amount of Material Transfers recorded during month of July 1906 as recorded in Register of Disbursements folios 207 and chargeable as follows:			
115	General Expense	92.16		92.16
115	Machinery & Tools	3.75		3.75
115	Manufacturing	47.10		47.10

Orange, N.J. July 1906

713 Manufacturing

Manufacturing

To consolidate Spring Motor and Phonograph accounts for month of July 1906.

710 Phonograph 186.15 Spring Motors 150

1866.15 X

X 1866.15

Orange, N.J. August 31, 1906

✓ General

713

Individuals' Accts

2,246.36 1/6

In amount of bills rendered during month of August 1906 as recorded in Register of Disbursements, paid exp. 2.200.00 and chargeable as follows:

713 General Expense

34,652.49 1/2

191 Machinery Tools

99,954.1

193 Real Estate Buildings

591.05 1/2

37 Furniture Fixtures

234,852.00

192 Automobiles

220.00 00

713 Manufacturing

190,731.57 1/2

713 Individuals' Accts

605.64

✓ General

713

Manufacturing

✓ 6,270.00 3

In amount of Material Disbursements rendered during month of August 1906 as recorded in Register of Disbursements, paid exp. and chargeable as follows:

713 General Expense

1,233.04 5/8

191 Machinery Tools

482.31

193 Real Estate Buildings

120.20 1

37 Furniture Fixtures

535.81

713 Manufacturing

50 177.37 1/2

713 Manufacturing

2,489.69 8

713

Manufacturing

X 2,489.69

To consolidate Spring Motor and Phonograph accounts for month of August 1906.

710 Phonograph

186.15

Spring Motors

150

713 General Expense

1,250.00

713

Individuals' Accts

✓ 1,250.00

To transfer Baker Extra Expense to General Expense:

193

Baker Extra Expense

193

Baker Extra Expense

2

713 General Expense

60.75 1

713

Individuals' Accts

✓ 60.75

For amount of cash disbursements allowed to pump station of Baker Acute Rec. month of August 1906 as recorded in Baker Acute Rec. for the

14

Baker Acute Rec. 60.75

Orange N.J. August 21-22, 1906

1143	Individuals <i>Debit</i>	1283.65 ✓	
1143	General Expense	✓	1283.65
	For amount of each dividend deducted in prompt payment of this month of August 1906 as recorded in bank book of July 1906 15.00 ✓		
1143	General Expense	16	51.67 ✓
1143	Individuals <i>Debit</i>	✓	51.67
	To credit 1/2 of R. Williams' loan by Smith-Gardner with 2 1/2% each dis. count on July purchase deducted in remittance received this day- 64 ✓		
1143	R. Williams' loan by Smith-Gardner	16	51.67 ✓
1143	Individuals <i>Debit</i>	31	220.62 ✓
	General Expense	✓	220.62
	For amount of bills entered in Abstract of Sales for month of August 1906, July 5-15 and 20 to be credited as follows:		
1143	General Expense	4	47.15 ✓
1143	Debit	✓	1240.66 ✓
1143	And Interest	2	66.00 ✓
1143	Unpaid Bond Interest	✓	66.00
	For amount of Bond Interest due this day on coupon '18 20 ✓		
1143	Dividends	601.80 ✓	
1143	Individuals <i>Debit</i>	✓	601.80
	To a dividend of 1 1/2% on shares owned by the company entitled thereto, payable August 20, 1906:		
	by (Dividend '06)		
1143	Chas. Nicholson	142.44 shares @ 12% =	31.00 ✓
1143	13 Mrs. Mrs. Robinson	166.750	37.50 ✓
1143	116 Mary A. Buckniece	750.00	16.25 ✓
1143	17 International Telephone Co.	1130.00	19.95 ✓
1143	1 Mrs. A. Edison	270.1210	24.90 ✓
1143	1 John F. Pendergast	10.00	1.80 ✓
1143	8 Mrs. C. Robinson	162.00	20.25 ✓
1143	100 Oliver J. Mills	5.00	6.75 ✓
1143	106 S. C. Thompson	5.00	6.25 ✓
1143	17 John R. Schumacher	5.00	6.25 ✓

Orange N.J. August 21-22, 1906

1143	Individuals <i>Debit</i>	960.0 ✓	
1143	Individuals <i>Debit</i>	✓	960.0
	To transfer for the following accounts:		
1143	Edison Portland Cement Co.	Edison Cement Works	15 ✓
1143	Individuals <i>Debit</i>	125 ✓	
1143	Individuals <i>Debit</i>	✓	125
	To transfer above amount from National to Works books; same being cash received August 1 by stock by 2 ✓		
1143	National Phonograph	125 ✓	
1143	Individuals <i>Debit</i>	60 ✓	
1143	Individuals <i>Debit</i>	✓	60
	To transfer for the following amount from National to Works books:		
1143	National Phonograph	60 ✓	
1143	Individuals <i>Debit</i>	165 ✓	
1143	Individuals <i>Debit</i>	✓	165
1143	4 Baker Acute Row	165 ✓	
1143	51 High Valley Rd. Co.	102 ✓	
1143	103 Addison Aubrey	125 ✓	
1143	Individuals <i>Debit</i>	245 ✓	
1143	Individuals <i>Debit</i>	✓	245
	To transfer for the following accounts:		
1143	4 Chas. Nash	52 ✓	
1143	100 J. S. Rogers	19 ✓	
1143	S. C. Robinson	101 ✓	
1143	Chas. Robinson	4 ✓	

Orange, N.J. September 1906

715 Individuals & Co's	Individuals & Co's	715	2950	✓	2950
Received this day note from Valentine Samp's Co. at one month payable at the Merchants Natl Bank, New Haven, Ct.					
✓ 4 Bates Accts Rec. 22.50	Bates Accts Rec.	✓			
✓ 50 Bates Notes Receivable 33.75	Valentine Samp's	✓			
716 General Expenses	Individuals & Co's	716	40.53	✓	40.53
Is credit account of R. S. Williams & Sons Co Toronto, Canada with 2% C. & L. discount on August purchases, deducted in remittance received this day					
R. S. Williams & Sons Co.	No. 53	16			
717 General Expenses	Individuals & Co's	717	53.04	✓	53.04
Amount of cash discount allowed for prompt payment of Bates Accts Rec. for month of Sept 1906 as recorded in Cash Book 77 July 22 to 15 June 1906		41			
718 Individuals & Co's	Individuals & Co's	718	820.60	✓	820.60
Amount of cash discount deducted in prompt payment of bills during Sept 1906 as recorded in Cash Book 77 July 22 to 16 June					
719 Sundries	Individuals & Co's	719	124.33	✓	124.33
Amount of Disbursements paid during month of September 1906 as recorded in Register of Disbursements folios 221 to 229 Inc. and chargeable to:					
720 General Expense	Individuals & Co's	720	45.09	✓	45.09
19 Machinery & Tools			14.15	✓	14.15
23 Real Estate Buildings			6.69	✓	6.69
24 Furniture & Fixtures			12.95	✓	12.95
25 Manufacturing			18.10	✓	18.10
26 Individuals & Co's			6.12	✓	6.12

Orange, N.J. September 1906

727 Sundries	Manufacturing	727	1543.65	✓	1543.65
Amount of Material Transfers for month of September 1906 as recorded in Register of Disbursements folios 224 to 229 Inc. and chargeable to:					
728 General Expense			11.53	✓	11.53
19 Machinery & Tools			67.37	✓	67.37
23 Real Estate Buildings			21.57	✓	21.57
24 Furniture & Fixtures			15.21	✓	15.21
25 Manufacturing			42.10	✓	42.10
729 Manufacturing	Manufacturing	729	2100.62	✓	2100.62
To consolidate Spring Motor & Thro's for month of September 1906					
70 Thro's	Spring Motor	118	2130.36	✓	2130.36
730 Individuals & Co's	Individuals & Co's	730	233.97	✓	233.97
For amount of Sales during month of September 1906 as recorded in Sales Abstract folios 71 to 76 And to be credited as follows:					
731 General Expense		731	11.53	✓	11.53
732 Sales		732	223.44	✓	223.44
733 Manufacturing		733	15.57	✓	15.57
734 General Expense	Individuals & Co's	734	1000.00	✓	1000.00
To transfer amount of Bates Accts Expense for month of September 1906 from Bates Accts Receivable to General Ledger					
735 Bates Accts Rec. 100.00					
736 Bates Accts Expense 100.00					
737 Individuals & Co's	Individuals & Co's	737	189.57	✓	189.57
To transfer the following amounts:					
111 I. Carbons	S. Carbons	111			
2 National Phonos	C. L. Jones	2			

Orange, N.J. September 1906

Individuals & Cos

To transfer the above amount to Samuel Howell & Co.
July 24 Cash Note by credits to C. Prof.
J. S. Morgan & Co.
4 Sales Accts Recd 300.00
100 C. Prof. J. S. Morgan 300.00 Samuel Howell & Co.
30

Manufacturing

Real Estate & Buildings 388
To correct distribution of Voucher No. August
charged in error to Sales
160 Miscellaneous Orders 200

3000.00

3000.00

3000.00

3000.00

Orange, N.J. October 1906

Individuals & Cos

To amount of bills rendered during month of
October 1906 as recorded in Register of Disbursements
folio 230-235 and to be charged as follows;

General Expense

Machinery & Tools

Real Estate & Buildings

Furniture & Fixtures

Manufacturing

Sales

Individuals & Cos

Manufacturing

To amount of Material drawn from warehouse during
month of October 1906 as recorded in Register
of Disbursements, folio 231, and to be charged
as follows;

General Expense

Machinery & Tools

Real Estate & Buildings

Furniture & Fixtures

Manufacturing

Manufacturing

Manufacturing

To consolidate Spring Meter, Thru No.

Barograph 180.55 Spring Meter 198

Individuals & Cos

General Expense

To amount of Sales for month of October 1906
as recorded in Sales Abstract - folio 85-95 and
and to be credited as follows;

General Expense

Sales

Manufacturing

12762.1900

35658.1900

19380.5000

79237.0000

47500.0000

20967.0600

47660.0000

80811.0000

17291.2400

14613.1100

13557.0000

16143.0000

241.0000

57599.5000

180550.0000

180550.0000

25575.2400

14065.0000

17857.8300

846.0000

Orange, N.J. October 1906.

31 General Expense

Individuals & Co's

For amount of bank discounts allowed. Cakes Accts Recd for prompt payment of accounts during month of October 1906 as recorded in bank book 7 folios 61 to 74 inclusive.

Cakes Accts Recd 61.25 4

31 Individuals & Co's

General Expense

Amount of bank discounts deducted during month of October 1906 for prompt settlement of accounts payable as recorded in bank book 7 folios 61 to 74 inclusive.

15

31 General Expense

Individuals & Co's

To credit the acct of R. S. Williams Bros Co, Ltd Toronto, Canada, with 2% cash discount on September purchases deducted in remittance received. this day

R. S. Williams Bros Co Ltd 53.25 16

31 General Expense

Individuals & Co's

Transferring amount of Dates & Co's Expense for month of October 1906 from Dates Accts Recd to General Ledger

Dates Accts Recd 100.00 4

Dates & Co's Expense 100.00 2

Individuals & Co's

Individuals & Co's

To transfer the following accounts:-
National Thrust Co.

30.00 A Auger

31 Individuals & Co's

Individuals & Co's

To suppose the following items:-

4 Dates Accts Recd

4 Dates Accts Recd 4

5 Expense

4 Dark Spinning Co 103

Orange, N.J. October 1906

31 Individuals & Co's

Individuals & Co's

To transfer the following accounts:-

National Thrust Co

Dates Accts Recd 89.00 4

National Thrust Co 18.50 1

31 Individuals & Co's

Individuals & Co's

To transfer the following amount as same was posted in error to N. of Dates & Co's Machine Co under date of February 3rd. last.

4 Dates Accts Recd

4 Dates Accts Recd 4

4 Dates & Co's Machine Co

4 Metal Stationery 1

Orange, N. J. November, 1906.

225 Individuals & Cos.	30	✓	958 ✓	✓
Individuals & Cos.	225		✓	958
To transfer the following amounts				
141 To Cash & Receipts	781			
101 W. Williams & Co. Cash	12			
50 Berlin Mills Co.	37			
103 Hachem Bros.	23			
101 Ocean State Mills Co.	11			
102 F. E. Douglas & Son	17			
105 P. & F. Corbin	12			
102 The Foot Mfg. Co.	27			
102 Fair Field & Supply Co.	15			
101 John S. Hughes & Co.	29			
3. Cash	06			
3. Cash	25			
51 Charles T. Hage	08			
101 E. W. Kierin & Co.	01			
3. Cash	10			
101 The M ^o Coal Co.	25			
103 Samuel Schütz	13			
103 B. F. Oliver & Co.	09			
50 Southern Coal Co.	47			
101 West Union Bros.	07			
103 Atlantic Steely Co.	15			
8 Roger Hunter Williams	40			
8 Del. Sav. & Loan Bk. Co.	75			
50 J. W. Spanghel	100			
H. Hagen & Bros.	103			
50 Barrett Mfg. Co.	105			
50 Charles C. Horne	01			
30				
Individuals & Cos.	225			
For amount of bills rendered during November, 1906 as recorded in				
Log of Disch. files 240 to 249 inc. and to be charged to				
222 General Expense	44			
172 Machinery & Tools	78			
222 Coal & Lumber Buildings	10			
240 Insurance & Franchise	01			
195 Automobiles	00			
210 Manufacturing	21			
222 Cash	91			
225 Individuals & Cos.	46			

Orange, N. J. November, 1906.

Individuals	30			
Manufacturing	213			
For amount of Material Transfer vouchers during				
November, 1906 as recorded in Register of Disbursement				
files 247 and to be charged to				
222 General Expense	18			
172 Machinery & Tools	75			
222 Coal & Lumber Buildings	00			
240 Insurance & Franchise	15			
210 Manufacturing	50			
30				
225 Individuals & Cos.	207			
Individuals				
For amount of Sales during month of November				
as recorded in Abstract of Sales, files 97 to 105				
inclusive and to be credited as follows				
General Expense	222			
Cash	242			
Manufacturing	213			
30				
222 General Expense	1			
Individuals & Cos.	225			
Transferring amount of Sales Sales Expense for				
month of November, 1906 from Sales Account forward				
to General Ledger				
Sales Accounts worth 175				
Sales Sales Expense 175				
30				
225 Individuals & Cos.	16			
General Expense	222			
Amount of cash discounts deducted in settlement				
of Accounts Payable during month of November, 1906				
as recorded in Cash Book - 47 files 170 to 179 inc.				
30				
222 General Expense	97			
Individuals & Cos.	225			
Amount of cash discounts received Sales Accounts				
receivable for prompt payments during month of				
November 1906 as recorded in Cash Book - 47				
files 172-179 inclusive				
Sales Cash Accounts 97				

Orange, N.J. November, 1906.

220 Individuals & Cos.	225	250.4	✓	2.00
Individuals & Cos.	225			
To transfer the following accounts:				
1. L. B. Expense Co.	2.00	16.00	Exp. Co.	901
221 General Expense	30	257.4	✓	257.4
Individuals & Cos.	225			
To credit account of P. Kelly with 2% cash discount on our bill Nov. 12-06. amount \$2.07 1/2				
P. Kelly	20.00	20.00		
222 General Expense	30	26.45	✓	26.45
Individuals & Cos.	225			
To credit account of W. H. Thorne & Co. with 2% cash discount on our bill dated Nov-12-06. \$132.44				
W. H. Thorne & Co.	20.00	20.00		
223 General Expense	14	19.50	✓	19.50
Individuals & Cos.	225			
To credit the account of R. S. Williams & Sons Co. Ltd., Toronto, Can. with 2% cash discount on October purchases, deducted in settlements received this day.				
R. S. Williams & Sons Co. Ltd.	10.00	10.00		
224 Individuals & Cos.	30	1.25	✓	1.25
Individuals & Cos.	225			
To cancel the item of C. P. Jackson, 1.25 appearing in Journal Entry, September 30.00				
C. P. Jackson	1.25	1.25		
225 Manufacturing	30	102.10	✓	102.10
Manufacturing	218			
To consolidate Spring Meter and Chronograph accounts for month of November, 1906.				
Chronograph	102.10	102.10		

Orange, N.J. November, 1906.

165 Dividends	22	6012.00	✓	6012.00
Individuals & Cos.	225			
For a dividend of \$1.25 per share on all the stock of the company entitled thereto payable November, 22nd 1906.				
Dividend # 22				
Chas. B. Bletcher	242,440 shares @ 1.25	303,050		
Mrs. Thomas A. Edman	44,500	55,625		
Henry B. Auchincloss	250,000	312,500		
Individuals & Cos.	225	1,750.00		
Thomas A. Edman	220,120	275,150		
John F. Hammett	12,000	15,000		
Wm. C. Gilman	112,000	140,000		
Oliver J. Wells	5,000	6,250		
C. H. Morrison	5,000	6,250		
John H. Schenckman	5,000	6,250		

Orange, N.J. December 1906

116	Individuals & Co.	31	Individuals & Co.	116	1900	1900
To transfer to following accounts						
13	Erie R.R. Co.	17	Erie R.R. Co. Chemical	104	1	
116	Individuals & Co.	31	Individuals & Co.	116	5784	5784
To transfer to above amount which was posted to the account of R.R. Williams & Son						
14	Bates Accts Rec.	57	Bates Accts Rec.	14	1	578
55	R.R. Williams & Son	57	Chas. R. Williams	105		
116	Individuals & Co.	31	Individuals & Co.	116	974	974
To transfer to following accounts						
14	Bates Accts Rec.	57	Bates Accts Rec.	14	1	97
107	B. F. Brown	57	Samuel Longfellow	50		
116	Individuals & Co.	31	Individuals & Co.	116	722014	722014
To transfer to following accounts						
14	R.R. Williams & Son	57	Chas. R. Williams	105	1	72201
		17	R.R. Williams & Son	16		
116	Individuals & Co.	31	Individuals & Co.	116	124	124
To transfer to Bates Mfg. Co. refund made to S.R. Brown Mfg. Office who paid this amount and which was subsequently collected by us						
14	Bates Accts Rec.	17	S.R. Brown Mfg. Co.	50	1	12
107	S. Cary Mfg. Co.	12				
110	General Expense	13			5953	5953
To credit account of R.R. Williams & Son Co. Ed. Toronto Canada with 2% Cash discount on December 1st purchase						
		On	R.R. Williams & Son Co. Toronto Canada	59	1	16

Orange, N.J. December 1906

116	Individuals & Co.	31	Individuals & Co.	116	475	475
To transfer amount from above 1st November erroneously credited to Prof. Egan						
116	Chagan	11	J. Egan	105	1	
116	Individuals & Co.	31	Individuals & Co.	116	201	201
To transfer credit appearing in % of Kluger to % of Kluger, which is the proper % of Kluger of same being the result of error in billing						
116	Kluger	20	Kluger	105	1	
110	General Expense	31			10000	10000
To transfer amount of Bates Extra expense for month of December 1906 from Bates Accts Receivable to General Expense						
	Bates Accts Rec.	10000	1			
	Bates Extra Expense	10000	1			
116	Individuals & Co.	31	Individuals & Co.	116	146553	146553
Amount of cash discount deducted in prompt settlement of accounts payable during current month, as recorded in Cash Book 11/14/189 both inclusive						
110	General Expense	31			8401	8401
Amount of cash discount allowed in prompt settlement of Bates Accts Rec. during current as recorded in Cash Book 11/14/189 both inclusive						
	Bates Accts Rec.	8401	1			

Orange, N.J. December 1906

Individuals		24661.80
<u>Sundries</u>		
For amount of bills entered in Abstract of Sales during month of Dec 1906 as recorded in Journal 113 & 121 which are, and to be credited as follows:-		
712	General Expense	4 139.48
147	Machinery Tools	4 97.11
147	Sales	1726.509.14
713	Manufacturing	4 166.657
Individuals		4940.4
<u>General Expense</u>		
To correct distribution of voucher 36, November, on which petty cash bill of J. S. Dunham was charged to General Expense instead of his account		
10	Dunham J.	49.40
Sales		28489.24
<u>Sales</u>		
To correct error in distributing bills 705 & 1218 credited to Phonograph instead of Arystine Telescope		
14	Arystine Telescope	39 284.89
Manufacturing		106.39
<u>Manufacturing</u>		
To consolidate Spring Motor Phonograph the month of December, 1906.		
710	Phonograph	106.39 Spring Motor
Sundries		4 656.309
<u>Manufacturing</u>		
For amount of Material purchased during month of December 1906 as recorded in Register of Disbursements Jnlrs 246-247 are, and to be charged as follows:-		
712	General Expense	140.33264
147	Machinery Tools	37.924
708	Real Estate & Buildings	20.0571
713	Furniture & Fixtures	27.0464
710	Material	57.081151

Orange, N.J. December 1906

Individuals		1384.13645
<u>Sundries</u>		
For amount of bills vouchered during month of December 1906 as recorded in Register of Disbursements Jnlrs 246-247 are, and to be charged as follows:-		
<u>General Expense</u>		
712	General Expense	55.16454
147	Machinery Tools	166.657
708	Real Estate & Buildings	119.46184
713	Furniture & Fixtures	58.5534
709	Material	67.2824
710	Material	252.28974
716	Individuals	109.164

Orange, N.Y. January 1st, 1907

No. Individuals Rec'd

Accounts Payable

205.59, 1194

460.559, 1194

I transfer the following accounts balances of Dec. 31, 1906, from Individuals Rec'd to Accounts Payable, minus wages they owe on their debt for the pump and engine of No. 2 division of the first unit, Individuals Rec'd No. 2.

1 American Steel Works	2,622.85	1
2 Rogers & Co. Co.	4500.	2
3 American Oil Supply Co.	475.59	4
4 American Metal Steel Co.	15.83	5
5 American Steel Co.	96	201
6 King & Sons	35.20	7
7 Whiting & Co. Co.	10.50	8
8 Thomas & Sons Supply Co.	167.44	9
9 American Steel & Pumping Co.	2,180.58	10
10 American Steel Working Supply Co.	1,900	101
11 A. H. Warner Co.	12.25	101
12 Atlas Chemicals Co.	40.00	101
13 American Agricultural Chemicals	532.06	101
14 Co. American Co.	100	201
15 Allen & Co. Co.	150	201
16 Briggs & Bros. Co.	1,808.25	1
17 Boston & Sons Co.	6,277.78	3
18 Brown & Sons Supply Co.	1,467.31	4
19 J. H. Williams & Co.	103.20	5
20 Herman & Sons Co.	211.22	6
21 Estate of J. B. Bailey	1000.	7
22 Cook & Co.	6.66	8
23 E. M. Bliss Co.	11.52	101
24 Arthur C. Barber	27.06	9
25 Baumhoff & Co.	713.20	11
26 J. H. Brown Co.	44.66	14
27 C. W. Brown	1470.	14
28 Brown & Co.	223	13
29 Clark & Sons	16.52	201
30 Clayton Machine Tool Co.	15.00	101
31 J. H. Co. of H. H. Brown	69.7	101
32 J. H. Co. of H. H. Brown	2.50	201
33 J. H. Co. of H. H. Brown	911.25	201
34 J. H. Co. of H. H. Brown	72.50	201
35 J. H. Co. of H. H. Brown	2.00	201

Forwarded

5497329

Orange, N.Y. January 1st, 1907

Forwarded 5497329

36 Barroughs & Sons Machine Co.	2.60	201
37 B. & S. Co.	76.20	201
38 B. & S. Co.	23.60	201
39 B. & S. Co.	25.00	201
40 B. & S. Co.	27.00	201
41 B. & S. Co.	27.90	1
42 B. & S. Co.	35.50	4
43 B. & S. Co.	1.00	19
44 B. & S. Co.	40.00	3
45 B. & S. Co.	12.40	20
46 B. & S. Co.	97.87	4
47 B. & S. Co.	6.00	5
48 B. & S. Co.	121.29	6
49 B. & S. Co.	1211.62	8
50 B. & S. Co.	26.90	21
51 B. & S. Co.	10.40	9
52 B. & S. Co.	167.70	10
53 B. & S. Co.	23.50	11
54 B. & S. Co.	87.31	14
55 B. & S. Co.	384.49	13
56 B. & S. Co.	90.25	101
57 B. & S. Co.	27.20	1
58 B. & S. Co.	21.46	15
59 B. & S. Co.	158.03	22
60 B. & S. Co.	6.00	17
61 B. & S. Co.	1.47	21.10
62 B. & S. Co.	8.39	18
63 B. & S. Co.	34.30	201
64 B. & S. Co.	9.00	101
65 B. & S. Co.	170.86	201
66 B. & S. Co.	2.77	201
67 B. & S. Co.	11.70	201
68 B. & S. Co.	15.75	4
69 B. & S. Co.	16.00	7
70 B. & S. Co.	1.33	21.6
71 B. & S. Co.	14.67	101
72 B. & S. Co.	61.00	201
73 B. & S. Co.	25.00	8
74 B. & S. Co.	6.89	21.10
75 B. & S. Co.	25.50	201
76 B. & S. Co.	121.25	101
77 B. & S. Co.	2.00	201

Forwarded 5497329

Orange N.Y. January 1st 1907.

Forwarded		\$	cts	
11 Mrs. A. Edson	6399	1		
11 Crumley	5637	9		
5 Edwin Post and Co. Supply Co.	7525	4		
9 Edison Storage Battery Co.	6102	5		
11 Electric Chemical Supply Co.	15765	7		
12 City of New York	12944	8		
12 Cooper Iron Co.	98	101		
1 Electric Chemical Works	6875	9		
12 C. Edson	300	10		
101 E. J. F. Baker Co.	110	11		
100 Electric Lath Co.	00	101		
100 Cooper Chemical	400	101		
100 Frank Egan	250	11		
101 H. H. Franklin Mfg Co.	5844	1		
3 East Mfg Co.	4441	7		
4 The Iron Works Co.	400	101		
103 H. H. Frank Manufacturing Co.	8550	101		
101 H. H. Frank Manufacturing Co.	120	101		
101 P. H. Feltz	36600	101		
1 Central Electric Co.	1351.53	1		
101 H. H. Frank Co.	4909	7		
101 E. J. F. Baker Co.	2000	101		
3 H. H. Frank Co.	70908	9		
4 H. H. Frank Co.	111544	4		
9 Garon Machine Co.	66554	6		
101 H. H. Frank Co.	2776	3		
101 H. H. Frank Co.	75	101		
101 H. H. Frank Co.	390676	101		
101 H. H. Frank Co.	2058	101		
101 H. H. Frank Co.	670810	1		
101 H. H. Frank Co.	1700	9		
101 H. H. Frank Co.	21761	9		
101 H. H. Frank Co.	7658	101		
101 H. H. Frank Co.	120690	11		
101 H. H. Frank Co.	56225	5		
101 H. H. Frank Co.	2995	6		
101 H. H. Frank Co.	20707	7		
101 H. H. Frank Co.	107	101		
101 H. H. Frank Co.	1200	101		
101 H. H. Frank Co.	1470	7		
101 H. H. Frank Co.	44	101		

Forwarded 124775

Orange N.Y. January 1st 1907.

Forwarded		\$	cts	
201 Electric Chemical	104775	101		
201 H. H. Frank Co.	20000	101		
201 H. H. Frank Co.	4000	101		
201 H. H. Frank Co.	17700	101		
201 H. H. Frank Co.	2000	101		
201 H. H. Frank Co.	2423	101		
201 H. H. Frank Co.	37725	1		
201 H. H. Frank Co.	4400	101		
201 H. H. Frank Co.	1000	101		
201 H. H. Frank Co.	2037	101		
201 H. H. Frank Co.	2000	101		
201 H. H. Frank Co.	7500	101		
201 H. H. Frank Co.	1000	101		
201 H. H. Frank Co.	556190	101		
201 H. H. Frank Co.	2000	101		
201 H. H. Frank Co.	243079	101		
201 H. H. Frank Co.	1000	101		
201 H. H. Frank Co.	400	101		
201 H. H. Frank Co.	1700	101		
201 H. H. Frank Co.	800	101		
201 H. H. Frank Co.	1150	101		
201 H. H. Frank Co.	51343	101		
201 H. H. Frank Co.	53244	101		
201 H. H. Frank Co.	38231	101		
201 H. H. Frank Co.	777	101		
201 H. H. Frank Co.	507500	101		
201 H. H. Frank Co.	1170	101		
201 H. H. Frank Co.	1400	101		
201 H. H. Frank Co.	64100	101		
201 H. H. Frank Co.	2525	101		
201 H. H. Frank Co.	187000	101		
201 H. H. Frank Co.	50	101		
201 H. H. Frank Co.	10300	101		
201 H. H. Frank Co.	90	101		
201 H. H. Frank Co.	1200	101		
201 H. H. Frank Co.	19813201	101		
201 H. H. Frank Co.	98130	101		
201 H. H. Frank Co.	1055	101		
201 H. H. Frank Co.	2050	101		
201 H. H. Frank Co.	20	101		
201 H. H. Frank Co.	2731	101		

Forwarded 124775

Orange N.J. January 1st 1907

Forwarded		188.49 1/2
11 Clinton's Oil Supply Co	76.16	7
12 Clinton's Acme Mfg Co	55.62 1/2	8
13 Clinton Co	36.00	101
14 Clinton's Oil & Gas Co	3.60	9
15 Clinton's Oil & Gas Co	16.00	201
16 Clinton's Electric Supply Co	6.96	101
17 Clinton's Oil & Gas Co	66.50	
18 Clinton's Oil & Gas Co	67.50	101
19 Clinton's Oil & Gas Co	2.06	101
20 Clinton's Oil & Gas Co	70.46	101
21 Clinton's Oil & Gas Co	51.00	2
22 Clinton's Oil & Gas Co	35.62 1/2	1
23 Clinton's Oil & Gas Co	96.22	101
24 Clinton's Oil & Gas Co	91.60	3
25 Clinton's Oil & Gas Co	5.25	101
26 Clinton's Oil & Gas Co	111.72	101
27 Clinton's Oil & Gas Co	34.26	201
28 Clinton's Oil & Gas Co	20.55	201
29 Clinton's Oil & Gas Co	18.75	101
30 Clinton's Oil & Gas Co	15.60	101
31 Clinton's Oil & Gas Co	106.25	3
32 Clinton's Oil & Gas Co	7.20	8
33 Clinton's Oil & Gas Co	40.50	101
34 Clinton's Oil & Gas Co	28.00	5
35 Clinton's Oil & Gas Co	17.95	8
36 Clinton's Oil & Gas Co	21.47	65
37 Clinton's Oil & Gas Co	15.57	101
38 Clinton's Oil & Gas Co	29.95	101
39 Clinton's Oil & Gas Co	46.05	7
40 Clinton's Oil & Gas Co	50.21	201
41 Clinton's Oil & Gas Co	13.23	1
42 Clinton's Oil & Gas Co	27.25	2
43 Clinton's Oil & Gas Co	57.75	101
44 Clinton's Oil & Gas Co	21	101
45 Clinton's Oil & Gas Co	92.77	101
46 Clinton's Oil & Gas Co	52.25	101
47 Clinton's Oil & Gas Co	16.00	101
48 Clinton's Oil & Gas Co	35.94	101
49 Clinton's Oil & Gas Co	15.25	1
50 Clinton's Oil & Gas Co	65.67	101
51 Clinton's Oil & Gas Co	1.00	3

Forwarded 180.22 1/2

Orange N.J. January 1st 1907

Forwarded		185.31 1/2
11 Clinton's Oil Supply Co	130.14	9
12 Clinton's Oil Supply Co	1.20	9
13 Clinton's Oil Supply Co	54.17	6
14 Clinton's Oil Supply Co	13.15	12
15 Clinton's Oil Supply Co	4.11	10
16 Clinton's Oil Supply Co	5.90	101
17 Clinton's Oil Supply Co	38.50	101
18 Clinton's Oil Supply Co	75	101
19 Clinton's Oil Supply Co	6.60	101
20 Clinton's Oil Supply Co	50	101
21 Clinton's Oil Supply Co	75	101
22 Clinton's Oil Supply Co	45.50	101
23 Clinton's Oil Supply Co	4.61	101
24 Clinton's Oil Supply Co	3.00	101
25 Clinton's Oil Supply Co	2.60	101
26 Clinton's Oil Supply Co	1.00	101
27 Clinton's Oil Supply Co	2.50	101
28 Clinton's Oil Supply Co	1.50	101
29 Clinton's Oil Supply Co	2.13	101
30 Clinton's Oil Supply Co	5.45	101
31 Clinton's Oil Supply Co	7.30	101
32 Clinton's Oil Supply Co	5.90	101
33 Clinton's Oil Supply Co	20.75	101
34 Clinton's Oil Supply Co	12.00	101
35 Clinton's Oil Supply Co	8.60	101
36 Clinton's Oil Supply Co	35.00	101
37 Clinton's Oil Supply Co	3.50	101
38 Clinton's Oil Supply Co	20.00	101
39 Clinton's Oil Supply Co	47.10	101
40 Clinton's Oil Supply Co	9.94	101
41 Clinton's Oil Supply Co	6.00	101
42 Clinton's Oil Supply Co	5.00	101
43 Clinton's Oil Supply Co	5.17	101
44 Clinton's Oil Supply Co	31.50	101
45 Clinton's Oil Supply Co	10.76	101
46 Clinton's Oil Supply Co	17.13	101
47 Clinton's Oil Supply Co	2.00	101
48 Clinton's Oil Supply Co	4.97	101
49 Clinton's Oil Supply Co	2.30	101
50 Clinton's Oil Supply Co	1.39	101
51 Clinton's Oil Supply Co	1.50	101

Forwarded 208.09 1/2

Orange, N.J. January 1st 1907.

Bills rendered		205.01950
15. William Page	25.50	101
16. R. H. Mann	17.75	101
23. Matheson & Son	350.64	101
24. J. P. Williams	38.60	101
101. Matheson & Son	30.90	101
101. Matheson & Son	23.95	101
101. Matheson & Son	256.01	101
101. Matheson & Son	460.01	101
101. Matheson & Son	428.53	101
101. Matheson & Son	252.62	101
101. Matheson & Son	3,159.26	101
101. Matheson & Son	75	101
101. Matheson & Son	1200	101
101. Matheson & Son	205.59149	101

1. Manufacturing

In amounts as detailed under originally charged to Special Ship Order 46 and now transferred to this bill

103. Manufacturing

103. Bal. Bldg. Building

104. Machinery & Tools

105. General Expenses

106. Furniture & Fixtures

107. Per Factory108. Manufacturing109. Manufacturing110. Manufacturing111. Manufacturing112. Manufacturing113. Manufacturing114. Manufacturing115. Manufacturing116. Manufacturing117. Manufacturing118. Manufacturing119. Manufacturing120. Manufacturing121. Manufacturing122. Manufacturing123. Manufacturing124. Manufacturing125. Manufacturing126. Manufacturing127. Manufacturing128. Manufacturing129. Manufacturing130. Manufacturing131. Manufacturing132. Manufacturing133. Manufacturing134. Manufacturing135. Manufacturing136. Manufacturing137. Manufacturing138. Manufacturing139. Manufacturing140. Manufacturing141. Manufacturing142. Manufacturing143. Manufacturing144. Manufacturing145. Manufacturing146. Manufacturing147. Manufacturing148. Manufacturing149. Manufacturing150. Manufacturing151. Manufacturing152. Manufacturing153. Manufacturing154. Manufacturing155. Manufacturing156. Manufacturing157. Manufacturing158. Manufacturing159. Manufacturing160. Manufacturing161. Manufacturing162. Manufacturing163. Manufacturing164. Manufacturing165. Manufacturing166. Manufacturing167. Manufacturing168. Manufacturing169. Manufacturing170. Manufacturing171. Manufacturing172. Manufacturing173. Manufacturing174. Manufacturing175. Manufacturing176. Manufacturing177. Manufacturing178. Manufacturing179. Manufacturing180. Manufacturing181. Manufacturing182. Manufacturing183. Manufacturing184. Manufacturing185. Manufacturing186. Manufacturing187. Manufacturing188. Manufacturing189. Manufacturing190. Manufacturing191. Manufacturing192. Manufacturing193. Manufacturing194. Manufacturing195. Manufacturing196. Manufacturing197. Manufacturing198. Manufacturing199. Manufacturing200. Manufacturing201. Manufacturing202. Manufacturing203. Manufacturing204. Manufacturing205. Manufacturing206. Manufacturing207. Manufacturing208. Manufacturing209. Manufacturing210. Manufacturing211. Manufacturing212. Manufacturing213. Manufacturing214. Manufacturing215. Manufacturing216. Manufacturing217. Manufacturing218. Manufacturing219. Manufacturing220. Manufacturing221. Manufacturing222. Manufacturing223. Manufacturing224. Manufacturing225. Manufacturing226. Manufacturing227. Manufacturing228. Manufacturing229. Manufacturing230. Manufacturing231. Manufacturing232. Manufacturing233. Manufacturing234. Manufacturing235. Manufacturing236. Manufacturing237. Manufacturing238. Manufacturing239. Manufacturing240. Manufacturing241. Manufacturing242. Manufacturing243. Manufacturing244. Manufacturing245. Manufacturing246. Manufacturing247. Manufacturing248. Manufacturing249. Manufacturing250. Manufacturing251. Manufacturing252. Manufacturing253. Manufacturing254. Manufacturing255. Manufacturing256. Manufacturing257. Manufacturing258. Manufacturing259. Manufacturing260. Manufacturing261. Manufacturing262. Manufacturing263. Manufacturing264. Manufacturing265. Manufacturing266. Manufacturing267. Manufacturing268. Manufacturing269. Manufacturing270. Manufacturing271. Manufacturing272. Manufacturing273. Manufacturing274. Manufacturing275. Manufacturing276. Manufacturing277. Manufacturing278. Manufacturing279. Manufacturing280. Manufacturing281. Manufacturing282. Manufacturing283. Manufacturing284. Manufacturing285. Manufacturing286. Manufacturing287. Manufacturing288. Manufacturing289. Manufacturing290. Manufacturing291. Manufacturing292. Manufacturing293. Manufacturing294. Manufacturing295. Manufacturing296. Manufacturing297. Manufacturing298. Manufacturing299. Manufacturing300. Manufacturing301. Manufacturing302. Manufacturing303. Manufacturing304. Manufacturing305. Manufacturing306. Manufacturing307. Manufacturing308. Manufacturing309. Manufacturing310. Manufacturing311. Manufacturing312. Manufacturing313. Manufacturing314. Manufacturing315. Manufacturing316. Manufacturing317. Manufacturing318. Manufacturing319. Manufacturing320. Manufacturing321. Manufacturing322. Manufacturing323. Manufacturing324. Manufacturing325. Manufacturing326. Manufacturing327. Manufacturing328. Manufacturing329. Manufacturing330. Manufacturing331. Manufacturing332. Manufacturing333. Manufacturing334. Manufacturing335. Manufacturing336. Manufacturing337. Manufacturing338. Manufacturing339. Manufacturing340. Manufacturing341. Manufacturing342. Manufacturing343. Manufacturing344. Manufacturing345. Manufacturing346. Manufacturing347. Manufacturing348. Manufacturing349. Manufacturing350. Manufacturing351. Manufacturing352. Manufacturing353. Manufacturing354. Manufacturing355. Manufacturing356. Manufacturing357. Manufacturing358. Manufacturing359. Manufacturing360. Manufacturing361. Manufacturing362. Manufacturing363. Manufacturing364. Manufacturing365. Manufacturing366. Manufacturing367. Manufacturing368. Manufacturing369. Manufacturing370. Manufacturing371. Manufacturing

Orange January 1907

General Expense

Individuals

To credit of W. H. Slime & Co
with balance deducted in payment rec'd to day

W. H. Slime & Co 2 1/2

Individuals

Individuals

To transfer the following amount

R. S. Williams & Co Jan 1st 1907

R. S. Williams & Co Jan 1st 1907

Accounts Payable

General Expense

Amount of cash previously deducted
in prompt settlement of accounts payable
during month of January 1907 as recorded
in Cash Book No 7 folios 19 to 199

General Expense (Mfg)

Accounts Payable

The above amount was originally credited
to General Expense Mfg & Co in Petty Cash
Voucher #475 November 1906 instead of
Chas. Seaton chief #536
Chas. Seaton \$2.05

Individuals

Accounts Payable

To transfer the following amount
National Phone Co \$461.12

Individuals

Accounts Payable

To transfer following amount
Edison Mfg Co \$1445.45

2164

✓

2164

1307.81

✓

1307.81

2984

✓

2984

5461.12

✓

5461.12

1445.45

✓

1445.45

Orange January 1907

Accounts Payable

Individuals

To transfer the following amounts

Edison Storage Battery 101.49

Thomas A. Johnson 20.30

Edison Portland Cement Co 360

Edison Chemical Works 10.00

Accounts Payable

Individuals

To transfer following amount

Truba & Richardson 5.45

Machinery & Tools

Real Estate & Building

To transfer above amount representing sundry
charges made against I. S. O. #7810 vouchers
#169 #334 June 1907 #736 November which
properly belonged to I. S. O. #787

Sundries

Accounts Payable

To amount of bills rendered during
month of January 1907 as recorded
in Register of disbursements folio
250 - 274 due and to be charged on
following

General Expense

Machinery & Tools

Real Estate & Building

Sundries & Tools

National Phone Co. & Edison Co.

Manufacturing

Accounts Payable

138.44

✓

138.44

✓

3

4

5

5.45

✓

5.45

100

997.81

✓

997.81

1307.81

4761.64

635.59

397.71

49.67

147.61

2421.08

1457.35

Orange of January 1907

✓ Debit

31

Manufacturing

For amount of Raw Material Transfers
included during month of January 1907,
as recorded in Register of Debitments
Jan 22-27. To and to be charged as follows

✓ General Expense✓ Machinery Tools✓ Real Estate Building✓ Furniture Fixtures✓ Manufacturing✓ IndividualsDebit

For amount of bills entered in Abstract
of Sales during month of January 1907,
as recorded on folios 18-18 and to be
credited as follows.

✓ General Expense✓ Machinery Tools✓ Real Estate Building✓ Furniture Fixtures✓ Manufacturing

✓ 70222.76

10970.09

8689.4

8791.4

32685.4

58750.72

226222.76

✓ 21669

✓ 1000

✓ 224425.10

✓ 10

Orange of February 1907

✓ Debit

For amount of Bond Interest due this
day on Coupon #19.

✓ General Expense

✓ Individuals
To credit acct of R. S. Williams for be-
havior caused with Canal Deamont
deducted in payment rec'd to day
R. S. Williams Am. Co Ltd. Et. 22

✓ Dividend✓ Accts Payable

For a dividend of 1.00 per share
on all the stock of the company entitled
therefor payable February 20 1907

Charles Catalano 283.44 shares 310.00 101.4

Mr. Thomas A. Edison 466.75 " 533.00 101.4

Henry B. Archibald 280.00 " 336.00 101.4

Substantive Employees 1430.00 " 1716.00 101.4

Thomas A. Edison 2231.210 " 2677.01 1.4

John F. Roudolph 10.00 " 12.00 101.4

Wm. E. Edmore 163.00 " 203.75 101.4

Olive J. Miller 5.000.4 " 605.10 1.4

Ed. W. Harrison 5.000.1 " 605.10 1.4

John R. Schenck 5.000 " 605.10 1.4

Dividend #30

28314.400

✓ Individuals

✓ Individuals

To transfer the following amounts

1 Bates Accts Rec 18 Bates Accts Rec 1

51 C. S. Ripton 18 C. S. Ripton 54

✓ Individuals

✓ Individuals

To transfer the following amounts

1 Bates Accts Rec 17.75 Bates Accts Rec 1

15 C. S. Ripton 16.00 C. S. Ripton 16

3 C. S. Ripton 17.75 C. S. Ripton 4

130000.4

✓ 6300.00

2533.4

✓ 2533.4

6018.00

✓ 6018.00

18.4

✓ 18.4

1775.1

✓ 1775.1

Orange 14 February 1907

25			
776	Individuals	187.14	✓
776	Individuals	✓	187.14
	I transfer the following amounts		
	or		
1	Bates Accts Rec 187.14	Bates Accts Rec 1	
3	Suspense 87	Maigun Radiator Co 50	
		14.50 Frank Allison 107	
		9.35 Inland Bank Bk Co 107	
		7.64 M. M. Christy Co 101	
		16.00 A. J. Berger Co 101	
		3.34 Ch. Martin & Co 101	
		1.75 Canal Agency Co 107	
		2.75 Eagle Publishing Co 101	
		89.90 Stephen J. Williams 101	
		46.20 Willaham & Co 101	
776	General Expense	100.00	✓
776	Individuals	✓	100.00
	Transferring amount of Bates Extra Expense for month of February 1907 from Bates Accts Rec to General Ledger		
1	Bates Accts Rec \$100.00		
✓	Bates Extra Expense \$100.00		
776	Profit & Loss	196.14	✓
776	Individuals	✓	196.14
	To write off amount of Bates suspense for fiscal year ending February 28 th 1907		
1	Bates Accts Rec 196.14		
5	Bates Suspense 196.14		
776	Accounts Payable	200	✓
776	Individuals	✓	200
	To transfer the above amount from Individuals v. Bates to Bates Payable Ledger		
101	Suspense \$2.34	51	
776	Accounts Payable	250	✓
776	General Expense (P.L.)	✓	250
	To correct distribution of March 6 May 1905		
✓	A. Langfelder \$2.34		

Orange 14 February 1907

25			
776	Accounts Payable	1189.32	✓
776	General Expense	✓	1189.32
	Amount of Cash Discounts deducted in prompt settlement of Accounts Payable during month of February 1907 as recorded in Cash Book No 8 plus 10. inclusive		
776	General Expense	75.65	✓
776	Individuals	✓	75.65
	Amount of Cash Discounts allowed Bates Accts Receivable for prompt payment of bills during month of Feb 1907 as recorded in Cash Book No 8 plus 10. inclusive		
1	Bates Accounts Rec \$75.65		
197	Machinery & Tools	14.76	✓
776	Bates Extra Building	✓	14.76
	To correct distribution of March 6 th February on which items were distributed in error to S. L. O. 1781 instead of 1787		
	Items of Regal added to Feb of this date		
776	Manufacturing	415.42	✓
776	Bates Extra Building	✓	415.42
	To correct distribution of March 6 th January bills covered by which were charged to S. L. O. 1781 instead of 1787		
	Items of Regal added to Feb of this date		
196	Special Order \$415.42		
776	Accounts Payable	146	✓
776	Accounts Payable	✓	146
	To transfer following amounts to suspense		
	or		
✓	50 Official Business Co 25	Suspense 101	✓
✓	101 Baker & Hubler 21	" 9	✓
✓	101 Suspense 98	Empire Wire Co 201	✓

Orange 27 of February 1907

28			
✓ 161	<u>Accounts Payable</u>	2.50 ✓	
✓ 161	<u>Accounts Payable</u>	✓	2.50
	To transfer following a/c as check in payment of same. Voucher # 23 Jan. 1907. To memo been claimed		
✓ 161	O. Bellefleur 2.50 Surpense	101	
	<u>Accounts Payable</u>		
	<u>Individuals</u>	0	
	To transfer following item representing check kept on hand 1905 which was intended to be paid present whereabouts of payee being unknown		
	James L. per Surpense		
✓ 161	<u>Accounts Payable</u>	909.30 ✓	
✓ 161	<u>Accounts Payable</u>	✓	909.30
	To transfer the above amount		
✓ 1	Madison & Co 909.30 National Knobs	101	
✓ 161	<u>Individuals</u>	01 ✓	
✓ 161	<u>Accounts Payable</u>	✓	01
	To transfer the above item		
✓ 1	Cash Sale .01 Surpense	101	
✓	<u>Sundries</u>		
✓ 161	<u>Accounts Payable</u>	12797.50 ✓	
	For amount of bills rendered during month of February 1907, as recorded in Register of Disbursements folio 25 to 26 inclusive and to be charged as follows:		
✓ 163	<u>General Expenses</u>		
✓ 163	Machinery & Tools	38 56 15 ✓	
✓ 163	Real Estate Building	6 56 79 ✓	
✓ 163	Furniture & Fixtures	7 86 58 ✓	
✓ 163	Material Keros. & Interest etc.	19 07 45 ✓	
✓ 163	Manufacturing	19 30 73 ✓	
✓ 161	<u>Accounts Payable</u>	175670.82 ✓	
		60 34 ✓	

Orange 27 of February 1907

✓	<u>Sundries</u>		
✓ 163	<u>Manufacturing</u>		
	For amount of Raw Material, Sawdust & Houshold during month of February 1907, as recorded in Register of Disbursements folio 25, and to be charged as follows:		
✓ 163	<u>General Expenses</u>		
✓ 163	Machinery & Tools	13 00 64 ✓	
✓ 163	Real Estate Building	53 31 ✓	
✓ 163	Furniture & Fixtures	5 48 ✓	
✓ 163	Manufacturing	111 67 ✓	
✓ 163		36 06 53 ✓	
✓ 163	<u>Individuals</u>		
	<u>Sundries</u>	230 140 88 ✓	
	Amount of Sales for month of February 1907, as recorded in Abstract of Sales folio 139 to 140, both inclusive, and to be credited as follows:		
✓ 163	<u>General Expenses</u>		
✓ 163	Sales	✓ 799 70	
✓ 163	<u>Manufacturing</u>	✓ 225 81 1/2	
✓ 163		✓ 3459 86	
✓ 9	<u>Profit & Loss</u>		
✓	<u>Sundries</u>		
	To write off the following amounts:		
✓ 161	<u>Dividend Account</u>		127 07 00
✓ 163	<u>Bond Interest</u>		1 12 00 00
✓ 163	<u>Furniture & Fixtures</u>		5000 94 ✓
✓ 163	<u>Manufacturing</u>		1 5000 94 ✓
	To charge Furniture & Fixtures, and Labor & Material charged to Special Shop Orders + 18 N. 18 N. up to February 28 1907, being the installation of plumbing, wiring and heating apparatus in building, + 18		
		18 N. 1122 56	
✓ 163	Special Shop Orders + 5000 94		

February 1907

113	Manufacturing	28	19,498.4X
113	Manufacturing		\$ 19,498.4X
To transfer amount of labor & materials on special Shop Order # 181V & 181S as charged to July 28 1/2% from special Shop Order account to miscellaneous Shop Order account # 181V + 1259.45 + 181S - \$ 600.00			
would bring down for National House Co			
161	Miscellaneous Shop Order 1907	1907	Special Shop Order 1907
14V	Sales	46,722.72X	
14V	Sales		\$ 46,722.72X
To transfer balance of Scrap account to Photograph account.			
104	Scrap	46,722.72X	Photograph 4
713	Manufacturing	42,967.72X	
713	Manufacturing		\$ 42,967.72X
To transfer balance standing to credit of Japanning account July 25 1/2% by this includes inventory of July 25/07			
Value + 110.00			
199	Japanning	42,967.72X	Photograph 70
108	Real Estate Building	2,814.66Y	
201	General Expense (3000)		\$ 2,814.66
To correct error in distribution of Shop Order # 191.			
324	Individuals & Co	2,685.92X	
351	Accounts Payable		\$ 2,685.92X
To transfer the following accounts			
1	Edison Mfg Co	332.30X	2.1
2	Edison Storage Battery	405.83	5.1
3	Thomas A Edison	5.13	1.1
5	Edison Chemical Works	122.87	9.1

Orange 29 February 1907

113	Manufacturing	28	6,024.91X
113	Manufacturing		\$ 6,024.91X
To charge Photograph account with difference in Raw Material account as shown by Inventory of July 28 1/2%			
26	Photograph	6,024.91X	Raw Material 176
1	Sundries		
251	Accounts Payable		\$ 17,162.7
For amount of second distribution of sundries for month of February 1907 as recorded in Register of Disbursements July 28 1/2%			
233	General Expense	487.48X	
192	Machinery & Tools	1,092.47Y	
208	Real Estate Buildings	1,211.82X	
213	Manufacturing	2,360.4	
1	Sundries		
213	Manufacturing		\$ 19,846.27
For amount of second distribution of Material sundries for month of July 1907 as recorded in Register of Disbursements July 28 1/2%			
192	Machinery & Tools	849.60Y	
208	Manufacturing	1,849.67Y	
333	General Expense (3000)	1,816.21X	
213	Manufacturing		\$ 18,162.21X
To charge Edison's & Edison with difference of Box Factory account as shown by Inventory July 28 1/2%			
190	Box Factory	18,162.21X	
213	Manufacturing	21,677.57X	
233	General Expense		\$ 21,677.57X
To transfer expenses directly chargeable to Edison Mfg. Co. business for fiscal year ending Feb. 28/07			
190	Edison Mfg. Co. Machine	21,677.57	

Orange, N.J. February 1907.

1	Indiv. & Co.	-25-	
151	Accounts Payable		165,737
Total amount of United Distribution of Bonds, made of February 1907, as recorded in Register of Disbursements, Feb. 25			
151	General Expense	186,450.01	
150	National Phone Co. Interest %	155,193.4	
153	Manufacturing	57,770.4	
154	Individuals & Co.	21,125.44	
151	Accounts Payable		21,125.44
To transfer to Co. under National Photograph Co. 21,125.44			
151	Accounts Payable	25	
9	Profit & Loss		744
To transfer following %			
101	Insurance	76	

Mr. Individuals & Co.

244. Sales
To charge National Photo. Co. with an amount to make profit on Photographs & other accounts equal 15% of Labor & Material plus General Expense and Depreciation

	L.M.	Gen. Exp.	Int.	15%
Hours.	1,632.3731	512.552.72	1,027,490.39	177,925.76
Wage.	677,579.89	72,446.46	602,892.42	92,442.42
				287,667.57
Rep'd as shown by Rec'd. Photo. 120,080.28				
				198,787.46

1	National Photo. Co.	89,761.81
4	Photo.	67,843.33
9	Wage	21,925.48

Orange, N.J. February 1907.

213	Manufacturing	28 th	
237	General Expense		594,716.20 X
To distribute General Expense (Pro rata) over the following Manufacturing accounts.			
Percentage 27.72213			
20	Photo.	332,904.224	1,124,775.69
195	Auto. M. Machine	10,557.524	35,080.37
165	Wax	141,364.984	509,935.32
181	Miscellaneous	3,587.044	12,927.30
186	Fan Motor	50.324	151.53
171	Printing Plates	12,700.004	45,011.78
197	Cabinets	102,533.714	378,555.04
		594,716.20	

242 Sales

213 Manufacturing
To transfer cost of sales of the following accounts for the fiscal year ending Feb. 28, 1907

4	Photographs	1,319,490.39	20
15	Auto. M. Machine	69,998.65	19
67	Photo. Mdr.	1,329.53	118
9	Wax	603,892.43	165
28	Miscellaneous	10,675.14	181
107	Fan Motor	396.94	186
39	Print. Plates	50,433.24	171
57	Printing Sub.	7,225.00	168
111	Cabinets	440,246.95	197

244 Sales

Profit & Loss
To profit realized on the following accounts for year ending Feb. 28, 1907

4	Photographs	197,923.56	20
15	Auto. M. Machine	12,705.54	19
67	Photo. Mdr.	1,912.13	118
9	Wax	90,584.01	165
28	Miscellaneous	39,99.63	181
107	Fan Motor	188.16	186
39	Print. Plates	234.72	171
57	Printing Sub.	174.05	168
111	Cabinets	414.64	197

Orange N.J. March 1907

31		
69	<u>Accounts Payable</u>	637 13.4
69	<u>Accounts Payable</u>	637 13.4
	To transfer the following amount	
10	Madison Co 637 13.4	
	National Phone Co 637 13.4	
31		
39	<u>Individuals Co.</u>	11 486 47.4
69	<u>Accounts Payable</u>	11 486 47.4
	To transfer the following amounts	
1	National Phone Co 8,079 38	10
1	Edison Mfg Co 2,911 27	2
1	Edison Storage Battery Co 10 00	5
3	Thomas A. Edison 11 38	1
31		
69	<u>Accounts Payable</u>	1098 99.4
99	<u>General Expense</u>	1098 99.4
	Amount of Cash Disbursements deducted	
	in prompt settlement of Accounts	
	Payable during month of March 1907	
	as recorded in Cash Book 8 folio 17 to 19	
99	<u>General Expense</u>	98 98.4
39	<u>Individuals Co.</u>	98 98.4
	Amount of cash disbursements allowed	
	in prompt settlement of Bates Accts	
	Rec. during current month as recorded	
	in Cash Book 8 folio 11 from Cash inclusive	
1	Bates Accts Rec. 98 98.4	
99	<u>General Expense</u>	188 00.4
39	<u>Individuals Co.</u>	188 00.4
	To transfer amount of Bates Accts	
	Expense for current month from	
	Bates Accts Rec. Ledger into General	
	Ledger	
1	Bates Accts Rec. 188 00.4	
1	Bates Co. Exp. 188 00.4	

Orange N.J. March 1907

31		
39	<u>Individuals Co.</u>	248 41.00 84
1	<u>Sundries</u>	
	For amount of bills entered in Abstract	
	of Sales during month of March 1907	
	as recorded on folios 15 to 17 of Abstract inclusive	
	and to be credited as follows	
99	<u>General Expense</u>	188 00.4
109	<u>Sales</u>	248 41.00 84
31		
1	<u>Sundries</u>	
69	<u>Accounts Payable</u>	1338 183 64
	For amount of bills rendered during month	
	of March 1907 as recorded in Register of	
	Disbursements folio 25 to 27 inclusive	
	and to be debited as follows	
99	<u>General Expense</u>	57 870 37.4
749	<u>Machinery & Tools</u>	7 283 81.4
769	<u>Rail Cattle & Buildings</u>	35 265 53.4
789	<u>Furniture & Fixtures</u>	499 96.4
799	<u>Manufacturing</u>	266 658 17.4
69	<u>Accounts Payable</u>	47 80.4
31		
1	<u>Sundries</u>	157 649 61.4
	<u>Manufacturing</u>	
	For amount of material transferred to stock	
	during month of March 1907 as recorded	
	in Register of Disbursements, folio 27 to	
	and to be debited as follows	
99	<u>General Expense</u>	128 00 69.4
749	<u>Machinery & Tools</u>	88 428.4
769	<u>Rail Cattle & Buildings</u>	120 83.4
789	<u>Furniture & Fixtures</u>	142 99.4
799	<u>Manufacturing</u>	444 88 57.4

Orange 29 April

39	Accts Rec	7	Accts Rec	39	4.15 1/4	4.15
	To transfer the following accounts					
	Bates Accts Rec	415	Bates Accts Rec	1		
1	James Hinton	100	United States Government	1		
3	Superfund	55	St. W. Smith Sons Co	1		
3			2.10	Locher Smith & Washburn	102	
53	H. H. K. Son	18	Superfund	3		
53	Superfund	10	St. Ketchum	56		
53	A. Hibbs	27	Lehigh Valley R.R. Co	57		

69	Accounts Payable	1266.41 1/2				
69	Accounts Payable	1266.41				
	To transfer following to Accts of National Home Co					
10	National Home Co	1736.75	Edwin Beckland Smith	11		

99	General Expense	705.1				
29	Accounts Receivable	705.				
	To credit 4% of W. H. Thorne & Co					
	Signed W. H. Thorne & Co with 4% cash discount					
	deducted in payment, read this day					
1	W. H. Thorne & Co Ltd	7.25				

99	General Expense	6137.4				
29	Accounts Receivable	6137.				
	To credit the following accounts with					
	cash amounts deducted in April payments					
1	St. Williams Sons Co Trade	57.75				
1	" Ministry	16.05				
1	W. H. Thorne & Co	676				
1	Bates Kelly	675				

99	General Expense	1858.1				
29	Accounts Rec	1858.				
	To credit the following account					
	with cash amounts deducted in payment					
	read this day					
1	W. H. Thorne & Co Ltd	1858.1				

Orange 29 April 1907

69	Accounts Payable	1171.46 1/2				
99	General Expense	1171.46				
	Amount of cash amounts deducted in					
	prompt settlement of Accounts Payable					
	during month of April 1907 as recorded in					
	Cash Book & folios 24 to 25 inclusive					

99	General Expense	68.15 1/2				
29	Accounts Receivable	68.15				
	Amount of Cash amounts allowed in					
	prompt settlement of Bates Accts Rec					
	for month of April 1907 as recorded in					
	Cash Book & folios 21 to 25 inclusive					
1	Bates Accounts Receivable	68.15 1/2				

99	General Expense	85.4				
69	Accounts Payable	85.				
	To credit John Johnson & Co amount of					
	with amount deducted in payment					
	read for payment, amount of 7 1/2 for \$41.54					

99	General Expense	1000.00 1/2				
29	Accounts Receivable	1000.00				
	To transfer amount of Bates Accts Rec					
	for month of April 1907 from Bates Accts					
	Receivable to General Ledger					
1	Bates Accounts Receivable	100.00 1/2				
1	Bates Accts Expense	100.00				

29	Accounts Receivable	277.58.16 1/2				
	Succeeded					
	amount of Sales for month					
	of April 1907 as recorded in					
	Abstract of Sales folios 72 to 155					
	both inclusive and to be credited					
	as follows					
99	General Expense	585.89				
109	Sales	6277.88.06				

Orange 29 April 30th 1907

✓ 69	<u>Dividends</u>		1244 620.05
	<u>Accounts Payable</u>		
	For amount of Bells vouchers during month of April 1907 as recorded in Report of Disbursements folios 225-228		
	To be charged as follows.		
99	General Expense	444 465.49	✓
749	Machinery & Tools	344 160	✓
746	Real Estate & Buildings	1219.79	✓
730	Furniture & Fixtures	407.32	✓
9	Automobiles	300.00	✓
174	Manufacturing	2005 1160	✓
69	<u>Accounts Payable</u>	6056	✓
✓ 176	<u>Dividends</u>		470890.50
	<u>Manufacturing</u>		
	For amount of material transferred to work during month of April 1907 as recorded in Report of Disbursements folios 228 to be charged as follows.		
99	General Expense	14100.26	✓
749	Machinery & Tools	5070	✓
746	Real Estate & Buildings	5095	✓
730	Furniture & Fixtures	15489	✓
174	Manufacturing	51531.72	✓
30	<u>Accounts Receivable</u>	245990.5	✓
64	<u>Accounts Payable</u>	124599.07	✓
1	To transfer the following amounts		
1	National Trust Co	20046.40	10
✓ 1	Edwin May Co	1761.25	7
✓ 5	Edwin Chemical Works	115.00	4
✓ 1	Edwin Storage Battery	17.50	5
3	Thomas A Edison	6.76	1

Orange 29 May 1907

✓ 176	<u>Dividends</u>	20 th	601800	✓ 601800
	<u>Accounts Payable</u>			
	For dividend of 1 st per share on all the stock of the company entitled thereto payable May 20 th 1907			
	Charles Batschelor	248 540 share @ 1%	310.50	101
	Thomas A Edison	146 750 " " "	183 44	11
	Harry B Bushnell	460 000 " " "	318.50	11
	International Explorations	1420.000 " " "	1787.50	101
	Thomas A Edison	2201.710 " " "	2789.01	1
	John H. Randolph	10 000 " " "	12.50	101
	W. C. Schuman	142 000 " " "	2027.51	02
	John H. Schuman	5 000 " " "	6.25	9
	Charles C. May	5 000 " " "	6.25	102
	E. D. Phillips	5 000 " " "	6.25	102
34	<u>Accounts Receivable</u>		197	✓
39	<u>Accounts Receivable</u>		197	✓
	To transfer the following amounts			
1	Bates Accts Rec	197	Bates Accts Rec	1
8	Bates Accts Rec	34	Supplies	3
100	Park & Long Co	05	"	"
104	Railway of N. C.	10	"	"
104	gas & Allen	10	"	"
103	Albright Paper Co	15	"	"
104	H. C. Stone	59	"	"
50	Edgar Brewster	07	F. E. Rayner	50
64	<u>Accounts Payable</u>		7985	✓
69	<u>Accounts Payable</u>		7985	✓
	To transfer following items to company of			
201	New York City & Hudson River Co	67.50	Supplies	101
201	James H. Langlin Co	12.00	"	101
99	<u>General Expense</u>		125.00	✓
39	<u>Accounts Receivable</u>		125.00	✓
	To transfer amount of Bates & Co Expense for month of May 1907 from Bates Accts Receivable to General Ledger			
1	Bates Accts Receivable	\$125.00		
✓ 1	Bates Bates Co Expense	125.00		

Orange 29 May 1907

39	Account Receivable	2601.18	✓	153.71
✓	Debit			✓ 13.75
	Amount of Sales for month of May 1907 as recorded in <u>Register of Sales</u> folio 19 to rev. both inclusive and to be credited as follows.			✓ 2560.29
99	General Expense			
799	Machinery & Tools			
149	Sales			
69	Account Payable	2880.4	✓	28.80
69	Account Payable			
	To transfer following items to suspense of Suspense 2500 Melbourn & Pairs. 301 300 Santa Monica & Melbourn 291			
39	Account Receivable	6156.24	✓	6156.24
69	Account Payable			
	To transfer the following amounts.			
1	Edwin Manufacturing Co. 2071.77	✓		
1	National Phone Co. 3777.91	10.		
✓	Edwin Storage Battery Co. 164.00	5.		
3	Thomas A. Edison 8.36	1.		
5	Edwin Chemical Works. 1.31	9.		
99	General Expense	6955.4	✓	59.88
39	Account Receivable			
	Amount of Cash Disbursements allowed. Both Account Receivable during month of May 1907 as recorded in Cash Book #8 folios 30 to 38 both inclusive.			
1	Both Account Receivable #69. 58			
69	Account Payable	1716.15	✓	1716.15
99	General Expense			
	Amount of Cash Disbursements deducted in prompt settlement of Account Payable during month of May 1907 as recorded in Cash Book #8 folios 30 to 38 inclusive.			

Orange 29 May 1907

77	General Expense	6662.4	✓	661.4
39	Account Receivable			
	Amount of Cash Disbursements allowed Account Receivable during month of May 1907 as recorded in Cash Book #8 folios 30 to 38 inclusive.			
✓	Debit			
149	Manufacturing	4720.74	✓	
	For amount of Raw Material Transfer. Incurred during month of May 1907 as recorded in Register of Disbursements folios 310 to 321, and to be charged as follows.			
99	General Expense	14260.04	✓	
149	Machinery & Tools	115.59	✓	
149	Raw Material & Buildings	44.68	✓	
729	Furniture & Fixtures	27.24	✓	
149	Manufacturing	57890.62	✓	
✓	Debit			
69	Account Payable	130692.74	✓	
	For amount of Bills Incurred during month of May 1907 as recorded in Register of Disbursements folios 310 to 321, and to be charged as follows.			
99	General Expense	42499.00	✓	
149	Machinery & Tools	13789.62	✓	
149	Raw Material & Buildings	8674.37	✓	
729	Furniture & Fixtures	179.03	✓	
9	Automobile	6800.00	✓	
729	National Phone Co. Int'l. Chn.	2256.68	✓	
149	Manufacturing	22000.67	✓	
69	Account Payable	6657.4	✓	

Orange N.J. May 1917

General Expenses

Amount of cash disbursements, as recorded above & below May 10th 1917, are as follows: in cash book No. 1 of 1917, for \$507.92. Amount 5% returned

Accounts Payable

560 ✓

560

Orange N.J. June 1917

Notes Receivable

Notes payable one year from date, particulars in envelope # 149

2000.00 ✓ 2000.00

Accounts Receivable

To transfer the following amount, as having received June 7th 1917 - 08¢ from J. J. Sullivan Center in Bankruptcy for the Cullen Co. Center (this covering second and final dividend of 3 $\frac{1}{2}$ % declared by Harold Remington, Receiver)

06 ✓ 06

1. Bates Auto Rec 06 Bates Auto Rec 1
104 H. Cullen Co 06 Suspense 3

Accounts Receivable

To transfer the following amount
1. Bates Auto Rec 14.00 Bates Auto Rec 1
50 Vance Redwood Lumber Co. 14.00 Vance Woodlands Co. 50

14.00 ✓ 14.00

Accounts Receivable

To transfer the following amount, Bill 25019
1. Bates Auto Rec 171 Bates Auto Rec 1
6. Custom House N.Y. 1.25 U.S. Government 1

17.25 ✓ 17.25

Accounts Payable

To transfer Petty cash fund of J. J. Bishop
101 Pay Roll Petty Cash Fund \$400.00 J. C. Harrison, 201

400.00 ✓ 400.00

General Expenses

To record distribution of March 1917-18 April 1917, on which time of 142.00 was for work done on Hall Shop order on charges to Miscellaneous Orders, instead of 100.00 from March 1917-18
Miscellaneous Orders \$100.00

100.00 ✓ 100.00

Average of June 1907

69	Accounts Payable	1400.10	
99	General Expense	✓ 1600.10	
	Amount of Cash Disbursements deducted in prompt settlement of Accounts Payable during month of June 1907 as recorded in Cash Book No. 8 folios 39 to 49 inclusive		
39	Accounts Receivable	12689.4	
69	Accounts Payable	✓ 12689.4	
	To transfer the following amounts		
1	Edwin Hogg Co	3698.44	✓
1	National Home Co	388.44	10
✓	Edwin Hogg Battery Co	3.34	5
3	Thomas Co. Station	54	✓
✓	National Home Co. Cash	7.29	14
39	Accounts Receivable	22869.05	
✓	Sundries		
	Amount of bills entered in Abstract of Sales during month of June 1907, recorded on folios 20 to 208 inclusive, and to be audited as follows:		
149	Sales	✓ 22869.05	
99	General Expense	✓ 409.81	
39	Accounts Receivable	1871.4	
39	Accounts Receivable	✓ 1871.4	
	Basis of this day Note from Valentine's Stamp Co. payable at Merchants National Bank, New York City in settlement of amount to March 1st 1907, 1 month due July 1st 1907		
1	Bates Accts Rec	18.24	1
✓	Bates Notes Receivable	1871.4	1
99	General Expense	7700.4	
39	Accounts Receivable	✓ 7700.4	
	For amount of Cash Disbursements allowed Accounts Receivable during month of June 1907 as recorded in Cash Book No. 8 folios 39 to 49 inclusive		

Average of June 1907

99	General Expense	10000.0	
39	Accounts Receivable	✓ 10000.0	
	To transfer amount of Bates Extra Co. payable for month of June 1907 from Bates Accts Rec to General Expense		
1	Bates Accts Rec	\$100.00	
✓	Bates Extra Expense	100.00	
99	General Expense	7971.4	
39	Accounts Receivable	✓ 7971.4	
	Amount of Cash Disbursements allowed Bates Accts Rec during month of June 1907 as recorded in Cash Book No. 8 folios 39 to 49 inclusive		
1	Bates Accounts Rec	79.44	
99	General Expense	264.0	
69	Accounts Payable	✓ 264.0	
	Amount of cash disbursements allowed Accounts Payable during month of June 1907 as recorded in Cash Book No. 8 folios 49 to 50		
✓	Sundries	129985.80	
69	Accounts Payable		
	For amount of bills received during month of June 1907 as recorded in Register of Disbursements folios 310 to 319 v. 8 & 319 to 320 v. 8 & 319 to 320 v. 8 & 319 to 320 v. 8		
99	General Expense	55706.00	
249	Machinery & Tools	636.78	
249	Cash Extra Building	8675.88	
249	Sundries & Extras	919.47	
149	Manufacturing	22800.63	
69	Accounts Payable	12689.4	
✓	Sundries		
149	Manufacturing	✓ 72745.40	
	For amount of Cash Disbursements allowed during month of June 1907 as recorded in Register of Disbursements folios 319 to 320 v. 8 & 319 to 320 v. 8		
99	General Expense	10806.71	
249	Machinery & Tools	2471.4	
249	Cash Extra Building	3992.8	
249	Sundries & Extras	144.37	
149	Manufacturing	61930.24	

Orangery July 1907

39	Accounts Receivable	257	
39	Accounts Receivable		25
	To transfer the following amount		
100	Superior Bank Acct Co. 25		
	Bates Accts Rec 1		
	25 Superior Bank Acct Co. 101		
39	Accounts Receivable	1854	
39	Accounts Receivable		185
	To transfer the following amounts		
1	Bates Accts Rec 185		
101	Superior Bank Acct Co. 185		
	Superior Bank Acct Co. 3		
99	General Expenses	12500.4	
39	Accounts Receivable		12500
	To transfer amount of Bates Accts Expenses		
	during month of July 1907 from Bates Accts		
	Rec to General Ledger		
1	Bates Accts Rec \$125.00		
✓	Bates Accts Expenses 125.00		
39	Accounts Receivable	4194	
39	Accounts Receivable		419
	To transfer to following amounts		
50	Bates Accts Rec 419		
50	Std. Stationery 10		
50	Wells Bates 59		
51	Gooding Bros 06		
3	Superior Bank 14		
	Superior Bank Acct Co. 101		
61	Standard Stationery Co. 35		
100	Lawrence Natl Bank 35		
6	Bates House 175		
100	W.D. Gooding 18		
100	Superior Bank Acct Co. 06		
69	Accounts Payable	15762.4	
99	General Expenses		15762.4
	Amount of Cash Disbursements deducted in		
	prompt settlement of Accounts Payable during current		
	month as recorded in Cash Book No 8 folios		
	45 to 56 inclusive		

Orangery July 1907

99	General Expenses	5786.4	
39	Accounts Receivable		5786.4
	Amount of Cash Disbursements allowed in		
	prompt settlement of Bates Accts Rec		
	during current month as recorded in		
	Cash Book No 8 folios 49 to 56 inclusive		
1	Bates Accts Rec 5786.4		
99	General Expenses	4844.4	
39	Accounts Receivable		4844.4
	Amount of Cash Disbursements allowed in		
	prompt settlement of Bates Rec during		
	month of July 1907 as recorded in		
	Cash Book No 8 folios 49 to 56 inclusive		
69	Accounts Payable	227.13	
69	Accounts Payable		227.13
	To transfer following amount to		
	National Phonos Co. Longers		
1	National Phonos Co. 227 to Edison Portland Cement Co. 11		
69	Accounts Payable	587	
39	Accounts Receivable		587
	To transfer the following amount		
213	Edison Portland Cement Co. 100		
59	Accounts Payable	1280.53	
213	Edison Portland Cement Co. 100		
	To transfer following amt to General Ledger		
101	Liability Insurance Reserve Fund \$1280.53		
69	Accounts Payable	9814.15	
213	Liability Insurance Reserve Fund		
	To transfer following amt to General Ledger		
101	Liability Insurance Reserve Fund \$9814.15		
99	General Expenses (Net)	2474	
213	Machinery & Tools		2474
	In current error in distribution of G.O. #2025		
	on Pay Roll number #464 April 1907		

Orange 22 July 1907

99 General Expense (May 7)	101,100	
249 Machinery & Tools	✓ 101,100	
In correct error in distribution of \$10,250-207 & 2175 on Pay Roll Vouchers + 568-171-171 May 4-18-20-2 1907.		
69 Accounts Payable	1357.09	991
39 Accounts Receivable	✓ 1357.09	991
In transfer to following accounts		
10 National Phone Co	N. 1027 84	1
✓ Edison Mfg Co	2073 75	1
5 Edison Storage Battery Co	147.65	✓
1 Thomas A Edison	8.55	3
9 Edison Chemical Works	93	5

✓ Sundries

119 Manufacturing	✓ 700394	
For amount of Raw Material transfered during month of July 1907 as recorded in Register of Disbursements folios 330 and to be charged to		

99 General Expense	50387.76	
249 Machinery & Tools	119284	
269 Real Estate Building	33300	
289 Furniture & Fixtures	190824	
119 Manufacturing	61351746	

✓ Sundries

69 Accounts Payable	✓ 122192.01	
For amount of bills rendered during month of July as recorded in Register of Disbursements folios 321 to 331 and to be charged to		

99 General Expense	50387.76	
249 Machinery & Tools	577984	
269 Real Estate Building	923876	
289 Furniture & Fixtures	101995	
249 National Phone Co	88400	
119 Manufacturing	24955716	
69 Accounts Payable	107001	

Orange 22 July 1907

39 Assets Receivable	✓ 169401.64	
Sundries		
For amount of Sales as recorded in Abstract of Sales during month of July 1907 folios 218 to 221 in entries, and to be credited as follows		
119 Sales	✓ 169660.84	
10 General Expense	✓ 2279120	

Orange, N.J. August 1907

69	Accounts Receivable	8.00 ✓	
69	Accounts Receivable	✓	8.00
	To transfer the following amount		
1	Bate Accts Rec 8.00	Bate Accts Rec	1
100	J. J. Kennedy 5.50	Norris & Parsons	100
3	Surpense 2.20		100
69	Accounts Receivable	2.00 ✓	
69	Accounts Receivable	✓	2.00
	To transfer the following amount		
100	Norris & Parsons 2.00	Bate Accts Rec	1
	3.00	Norris & Parsons	100
69	Accounts Receivable	31.34 ✓	
69	Accounts Receivable	✓	31.34
	To transfer the total amount of the following bills: "150.20557-27"		
	"150.20557-28" "150.20557-117"		
1	Bate Accounts Rec 31.34	Bate Accts Rec	1
50	Barnett Printing Co 31.34	Barnett Printing House	50
69	Accounts Receivable	23.00 ✓	
69	Accounts Receivable	✓	23.00
	To write off the following amount		
1	Bate Accts Rec 23.00	Bate Accts Rec	1
3	Surpense 23.00	Oliver & Spitzer Co	101
69	Accounts Receivable	34 ✓	
69	Accounts Receivable	✓	34
	To write off the following amount		
1	Bate Accts Rec 34	Bate Accts Rec	1
3	Surpense 17	Offices & Clerk	50
	7	G. E. Parsons	50
69	Accounts Receivable	6.13 ✓	
69	Accounts Receivable	✓	6.13
	To transfer the above amount		
1	National Phone Co. Orange 6.13	Bate Accts Rec	1
	6.13	National Phone Co. Ltd	51

Orange, N.J. August 1907

819	Dividends	20	
69	Accounts Payable	6018.00 ✓	
	For a dividend of 1.25 per share on all the stock of the Company entitled thereto payable August 20 th 1907		
	Charles Batchelor	248.40	Shawmut 312.55 61
	Wm Thomas A. Edison	466.75	" 582.44 61
	Henry B. Auchincloss	765.00	" 312.50 61
	International Telegraphs	1430.00	" 1787.50 61
	Thomas A. Edison	2281.25	" 2789.01 61
	John F. Randolph	10.00	" 12.50 61
	William C. Gilmore	163.00	" 203.75 102
	Alphons Wenter	5.00	" 6.25 102
	Paul C. May	5.00	" 6.25 102
	E. D. Phillips	5.00	" 6.25 102
	(Dividend 20.00)		
69	Accounts Payable	31	
69	Accounts Payable	28.20 ✓	
	To transfer following amount		
101	Surpense 28.20	Fred Berger	201
69	Accounts Payable	300 ✓	
69	Accounts Payable	✓	300
	To transfer the following amount		
101	J. J. Kennedy 3.00	Norris & Parsons	100
39	Accounts Receivable	17.75	
69	Accounts Payable	✓	17.75
	To transfer the above amount		
1	Bate Accts Receivable 17.75	Mell Fargo & Co. Exp.	1
11	Mell Fargo & Co. Exp. 1.75		
	2		
199	Bond Interest	6300.00 ✓	
109	Bond Interest	✓	6300.00
	For amount of Bond Interest due this day on coupon # 20.		

Orange 27 August 1907

39	Accounts Receivable	177	
40	Accounts Receivable	✓	175
	To transfer the following amounts		
	Bates Auto. Res. 175 Bates Auto. Res.		
	Standard Steel Car. Co. 175 American Steel Car. Co.		50
100	General Expense	100000	
40	Accounts Receivable	✓	10000
	To transfer amount of Bates Auto. Res. Expense		
	for month of August 1907 from Bates Auto.		
	Res. to General Expense		
	Bates Auto. Res. \$100.00		
	Bates Auto. Res. Expense \$100.00		
100	General Expense	44434	
40	Accounts Receivable	✓	44434
	Amount of Cash Disbursements allowed		
	Bates Auto. Res. during month of Aug. 1907		
	not recorded in Cash Book No. 8 folio 97 to 100		
	Bates Accounts Receivable \$444.34		
60	Accounts Payable	71461	
100	General Expense	✓	71461
	Amount of Cash Disbursements deducted in		
	prompts settlement of Accounts Payable		
	during month of August 1907 as recorded		
	in Cash Book No. 8 folios 97 to 104		
100	General Expense	22944	
40	Accounts Receivable	✓	22944
	For amount of Cash Disbursements allowed		
	Acct. Res. during month of August 1907		
	as recorded in Cash Book No. 8 folios 97 to 100 inclusive		
60	Accounts Payable	621	
100	General Expense	✓	621
	For amount of Cash Disbursements allowed		
	W. H. H. to balance out amount No. 885		
	not recorded in Cash Book No. 8 folio 58		

Orange 27 August 1907

39	Accounts Receivable	201005284	
	Securities		
	For amount of bills recorded in		
	Abstract of Sales folios 222 to 245		
	during month of August 1907 and		
	to be credited as follows:		
100	General Expense	✓	220448
109	Sales	✓	120122577
	Securities		
69	Accounts Payable	364345797	
	For amount of bills received during		
	month of August 1907 as recorded in		
	Register of Disbursements folios 301 to 343		
	and to be charged as follows:		
100	General Expense	50447461	
109	Machinery & Tools	6029681	
109	Rail Bldgs & Buildings	22985754	
109	Furniture & Fixtures	1196881	
109	Manufacturing	280619301	
69	Accounts Payable	757971	
	Manufacturing		
109	Manufacturing	17077066	
	For amount of Notes transferred		
	during month of August 1907 as recorded		
	in Register of Disbursements folios 343		
	and to be charged to		
100	General Expense	9527001	
109	Machinery & Tools	77491	
109	Rail Bldgs & Buildings	101401	
109	Furniture & Fixtures	844101	
109	Manufacturing	60918124	

Orange 29 August 1907

100	General Expense (Subd)	300	✓	300
769	Real Estate & Bldg			
	To correct error in Journal Entry 769, which was entered to correct error in distribution of Ship orders #1911. The above amount covers March & 5 October 1906 and was posted to Dr. #1911, in error as same covers labor on Dr. #1811 and should not have been included in entry of July 28/1907			
69	Accounts Payable	4462.54	✓	4462.54
40	Accounts Receivable			
	To transfer the following amounts:			
1	National Phone Co \$60.25	1		
2	Edwin Mfg Co 1590.45	1		
14	National Phone Co Longtith 11.05	2		
5	Edwin Storage Battery Co 360	2		
69	Accounts Payable	1314	✓	1314
69	Accounts Payable			
	To transfer the above amount			
5	Edwin Storage Battery 1 st Edwin Eden Works 9			
	Accounts Payable	245	✓	245
	Accounts Payable			
	To transfer following of from National Phone Co			
10	National Phone Co Dr. 1 st M. A. Barnes 701			
	Accounts Payable	1100	✓	1100
	Accounts Payable			
	To transfer following to suspense of			
101	Suspense 5 th M. A. Barnes 701			
101	5 th John H. W. and Son 701			
	Accounts Payable	2240	✓	2240
	Accounts Payable			
	To transfer following of to National Phone Co			
10	National Phone Co Orange 3 rd National Phone Co 701			

Orange 29 September 1907

40	Accounts Receivable	1037	✓	1037
40	Accounts Receivable			
	To transfer the following accounts:			
1	Bates Accts Rec 1037	1		
104	Edwin Accts Rec 05	3		
55	Harold's Mfg of Mfg 800	58		
2	Suspense 07	58		
50	A. E. Ransom 175	104		
117	Minutal P. & Station Co 50	5		
100	General Expense	10000	✓	10000
40	Accounts Receivable			
	To transfer amount of Bates Accts Rec for month of September 1907 from Bates Accts Rec to General Expense			
1	Bates Accts Rec \$100.00			
✓	Bates Accts Expense \$100.00			
100	General Expense	4858	✓	4858
40	Accounts Receivable			
	Amount of Cash Disbursements allowed Bates Accts Rec for prompt settlement of accounts during month of September 1907 as recorded in Cash Book & folio 65 to 73 inclusive			
1	Bates Accts Receivable \$48.58			
100	General Expense	1088	✓	1088
40	Accounts Receivable			
	Amount of Cash Disbursements allowed Bates Receivable during month of September 1907 as recorded in Cash Book & folio 65 to 73 inclusive			
69	Accounts Payable	1877.74	✓	1877.74
100	General Expense			
	Amount of Cash Disbursements deducted in prompt settlement of Accounts Payable during month of September 1907 as recorded in Cash Book & folio 65 to 73 inclusive			

Orange N. of September 1907

40	<u>Accounts Receivable</u>	286500.84
✓	<u>Summaries</u>	
	For amount of Sales during month of September 1907, as recorded in Abstract of Sales from 247 to 266 and inclusive and to be credited as follows:	
100	<u>General Expense</u>	1. 292.78
119	<u>Salaries</u>	286792.62
✓	<u>Summaries</u>	
119	<u>Manufacturing</u>	✓ 77427.31
	For amount of Raw Material Transfers involved during month of September 1907 as recorded in the Register of Disbursements from 554 and to be charged as follows:	
100	<u>General Expense</u>	14718.34
119	<u>Manufacturing</u>	25880.4
267	<u>Real Estate Building</u>	17624
277	<u>Furniture & Fixtures</u>	44119.4
119	<u>Manufacturing</u>	62011.40
✓	<u>Summaries</u>	
69	<u>Accounts Payable</u>	237957.18
	For amount of Bills Voucherized during month of September 1907 - as per record in Register of Disbursements from 544 to 554 inclusive and to be charged to:	
100	<u>General Expense</u>	43484.21
119	<u>Manufacturing</u>	7958.69
267	<u>Real Estate Building</u>	11709.91
277	<u>Furniture & Fixtures</u>	4683.64
119	<u>Manufacturing</u>	6063.64
69	<u>Accounts Payable</u>	2059.55
		11230.4
✓	<u>Summaries</u>	
110	<u>Accounts Payable</u>	153733.4
	<u>Accounts Receivable</u>	✓ 1837.93
10	To transfer the following accounts:	
1	National Phone Co 5077.40	1
2	General Exp. 50.40	2
3	General Exp. 46.00	3
4	General Exp. 117.00	4
5	General Exp. 528.00	5
6	National Phone Co 11230.4	6

Orange N. of October 1907

✓	<u>Summaries</u>	
40	<u>Accounts Receivable</u>	260000
	Received this day from Note from M.W. Hunt Co Ltd for \$650.00 cash payable at Orange N. of one, two, three & four months from date of settlement of this account, to September 1st 1907	
110	<u>Notes Receivable</u>	650.00
✓	<u>Summaries</u>	
4	M.W. Hunt Co Ltd	650.00
4	"	650.00
4	"	650.00
4	"	650.00
15		
119	<u>Insurance Premium Fund</u>	90.00
301	<u>Impounded Insurance Premium Fund</u>	✓ 90.00
	To transfer above amount representing fund premium on shipment insurance which was credited to former on July 1st 1907 (Memo A.C. Book 1907)	
✓	<u>Summaries</u>	
70	<u>Accounts Payable</u>	16250.4
69	<u>Accounts Payable</u>	✓ 16250
	To transfer following amount to National Phone Co Payables.	
1	National Phone Co 16250.40	
21		
110	<u>Accounts Receivable</u>	49.15
✓	<u>Summaries</u>	
40	<u>Accounts Receivable</u>	49.15
	Note received this day from H. Superior. Cash & Stamp Co payable in one month at the commercial bank of New York, New York, to be paid on Oct. 1st 1907	
1	Bates Accts. Rec. 49.15	
50	Bates Notes Receivable 49.15	

Orange 22 October 1907

100	General Expense	51.	125.00	✓	125.00
140	Accounts Receivable			✓	
	Transferring amount of Bates Extra Co. general during month of October 1907 from Bates Extra Pm to General Ledger				
	Bates Accounts Pm \$125.00				
	Bates Extra Expense 125.00				
100	General Expense		42.80	✓	42.80
140	Accounts Receivable			✓	
	Amount of Cash Disbursements allowed accounts Receivable during month of October 1907 as recorded in Cash Book No 8 folios 78 to 81 inclusive				
100	General Expense		34.89	✓	34.89
140	Accounts Receivable			✓	
	Amount of Cash Disbursements allowed Bates Accounts Receivable for prompt settlement of bills during month of Oct. 1907 as recorded in Cash Book No 8 folios 78 to 81 inclusive				
	Bates Accounts Pm 34.89				
70	Accounts Payable		1007.17	✓	1007.17
100	General Expense			✓	
	Amount of Cash Disbursements deducted in prompt settlement of Accounts Payable during month of October 1907 as recorded in Cash Book No 8 folios 76 to 81 inclusive				
140	Accounts Receivable		347.248.77	✓	
	Sundries				
	For amount of bills entered in Abstract of Sales during month of October 1907 as recorded in folios 268 to 284				
	Both inclusive and to be credited as follows				
100	General Expense			✓	
140	Sales		203.38	✓	203.38
			3346.965.39	✓	

Orange 22 October 1907

70	Accounts Payable	31.	4027.55	✓	4027.55
140	Accounts Receivable			✓	
	In transfer the following accounts				
10	National Phone Co	67.62	1		
5	Edwin Storage Battery Co	6.45	✓		
1	Thomas A. Edison	1.40	3		
4	National Phone Company		1		
3	Edwin Mfg Co	207.46.05			
		31			
70	Accounts Payable		162.50	✓	162.50
140	Accounts Receivable			✓	
	In transfer amount of cash bill \$162.50 to				
	Stock of National Phone Co				
1	National Phone Co	162.50	Edwin Mfg Co		
		31			
70	Accounts Payable		84.04	✓	84.04
140	Accounts Receivable			✓	
	In correct error in Abstract of Sales, Dec 1906				
	has erroneously charged to National Phone Co				
	Stock of National Phone Co, balance of \$84.04				
	Public R. Mfg Co. in Nov. 1906 \$84.04				
2	National Phone Co				
		31			
✓	Sundries			✓	
30	Accounts Payable		1369.512.79	✓	
	The amount of bills rendered during month of October 1907 as recorded in Register of Disbursements folios 349-51 and to be charged as follows				
100	General Expense		5532.40	✓	
140	Machinery & Tools		704.60	✓	
140	Real Estate & Building		1227.08	✓	
140	Furniture & Fixtures		1920.64	✓	
140	Electricity & Gas		229.75	✓	
140	National Phone Co		3010.46	✓	
140	Manufacturing		2917.89	✓	
70	Accounts Payable		130.53	✓	

Orange 29 October

✓	✓	<u>Surpluses</u>	31	
179		<u>Manufacturing</u>		✓ 85467.03
		For amount of Raw Material Transfers		
		forwarded during month of October 1907 as		
		recorded in Register of disbursements		
		folio 341 and to be charged as follows		
180		<u>General Expense</u>	181.33	524
179		<u>Machinery & Tools</u>	640.86	✓
179		<u>Rail Estate & Building</u>	700.17	✓
179		<u>Furniture & Pictures</u>	986.44	✓
179		<u>Manufacturing</u>	649.56	044

Orange 9 November 1907

40	✓	<u>Accounts Receivable</u>	1	
40		<u>Accounts Receivable</u>	56.34	✓
		Note received this day from Maurist Black		56.34
		Little Co for paper in ninety days at		
		First National Bank disbursements for an		
		in settlement of these amount to Sept. 22, 1907		
1		Bates Accts Rec	56.34	Bates Accts Rec
53		Bates Note Receivable	56.34	Maurist Black Little & H.
		<u>General Expense</u>	20	
100		<u>General Expense</u>	100.00	✓
40		<u>Accounts Receivable</u>	100.00	✓
		Transferring amount of Bates Accts Expense		
		during month of November 1907 from Bates		
		Accts Rec to General Ledger		
1		Bates Accts Rec	100.00	✓
2		Bates Accts Expense	100.00	✓
		<u>Accounts Receivable</u>	30	
40		<u>Accounts Receivable</u>	4.30	✓
40		<u>Accounts Receivable</u>	4.30	✓
		In suspense the following amounts		
1		Bates Accts Rec	4.30	Bates Accts Rec
106		C. A. Mayfield	35	Suspense
3		Suspense	3.95	Balance Sheet 100.00
		<u>Accounts Receivable</u>	30	
40		<u>Accounts Receivable</u>	248.62	✓
✓		<u>Surpluses</u>		
		For amount of Sales during month of		
		November 1907 as recorded in Abstract of Sales		
		folio 300 and to be credited as follows		
180		<u>General Expense</u>	124.70	✓
179		<u>Sales</u>	124.87	✓
		<u>Surpluses</u>	40	
179		<u>Manufacturing</u>	127.10	✓
		For amount of Raw Material Transfers		
		forwarded during month of November 1907		
		as recorded in Register of disbursements		
		folio 300 and to be charged as follows		
180		<u>General Expense</u>	125.22	✓
179		<u>Machinery & Tools</u>	128.44	✓
179		<u>Rail Estate & Building</u>	110.17	✓
179		<u>Furniture & Pictures</u>	124.87	✓
179		<u>Manufacturing</u>	224.65	✓

Orange Nj. November 1907

✓	<u>Liabilities</u>		
70	<u>Accounts Payable</u>		1233 580.00
	Amount of bills rendered during month of November 1947 as recorded in Register of Disbursements folios 883 to 890 nine and to be charged to		
100	<u>General Exp. Expense</u>	44669.56 ✓	
✓	Machinery & Tools	16 261.00 ✓	
✓	Real Estate & Buildings	23 371.93 ✓	
✓	Furniture & Fixtures	1757.00 ✓	
✓	National Phone Co. Interest on	3717.54 ✓	
✓	Liability Insurance Expense Fund	1430.00 ✓	
✓	Manufacturing	1371.50 ✓	
70	<u>Accounts Payable</u>	1044.00 ✓	
100	<u>General Exp. Expense</u>	85.47 ✓	
✓	<u>Accounts Receivable</u>		85.47 ✓
	Amount of Cash Disbursements allowed Accts Rec for prompt settlement of accounts during month of November 1947 as recorded in Cash Book No 8 folios 83 to 91 inclusive.		
	Notes Accts Receivable 85.47		
100	<u>General Exp. Expense</u>		
✓	<u>Accts Receivable</u>	2784.1 ✓	2784.1 ✓
	Amount of Cash Disbursements allowed Accts Rec for prompt payment of accounts during month of November 1947 as recorded in Cash Book No 8 folios 83 to 91 inclusive.		
70	<u>Accounts Payable</u>	596.1 ✓	
100	<u>General Exp. Expense</u>		596.1 ✓
	Amount of Cash Disbursements deducted in prompt settlement of Accounts Payable during month of November 1947 as recorded in Cash Book No 8 folios 83 to 91 inclusive.		
70	<u>Accounts Payable</u>		
✓	<u>Accounts Receivable</u>	7540.15 ✓	7540.15 ✓
	In transfer for the following accounts		
✓	National Phone Co. 9270.00		
✓	Union Storage & Realty Co. 1981		
✓	Johnson & Colwell 513		
✓	Union City 2127.37		
✓	National Phone Co. 11.49		

Orange NJ December 1907

40	<u>Accounts Receivable</u>		
40	<u>Accounts Receivable</u>	50.00	✓
	Received this day note from Valentine Stamp Co. for payment one month of the Merchants National Bank New Haven Conn. in settlement of this up to January 14/08		50.00
1	Bates Accts Rec 50.00	Bates Accts Rec	✓
53	Bates Nats Receivable 50.00	Valentine Stamp Co.	✓
100	<u>General Expense</u>	100.00	✓
40	<u>Accounts Receivable</u>		
	Transferring amount of Bates Extra Expense during month of December 1907 from Bates Accts Rec to General Ledger		
1	Bates Accts Rec \$100.00		
✓	Bates Extra Expense 100.00		
100	<u>General Expense</u>	50.00	✓
40	<u>Accounts Receivable</u>		
	Amount of cash discounts allowed Bates Accounts Receivable for prompt settlement of accounts during month of December 1907 as recorded in Cash Book 8 folio 92 to 99 inclusive		
1	Bates Accounts Receivable 50.00		
100	<u>General Expense</u>	23.50	✓
40	<u>Accounts Receivable</u>		
	Cash discounts allowed accounts receivable for prompt settlement of accounts during month of December 1907 as recorded in Cash Book No. 8 folio 92 to 99 inclusive		
1	Bates Accounts Receivable 23.50		
100	<u>Accounts Payable</u>	23.24	✓
40	<u>General Expense</u>		
	Amount of Cash discounts deducted for prompt payment of Bates Payable during month of December 1907 as recorded in Cash Book No. 8 folio 92 to 99 inclusive		
1	Bates Payable 23.24		

Orange, N.J. December, 1907.

31		
✓ 100	<u>Accounts Receivable</u>	18,344.15
	<u>Summaries</u>	
	For amount of sales during month of December, 1907, as recorded in Abstract of Sales folios 301 to 311, inclusive and to be credited as follows.	
100	<u>General Expense</u>	✓ 74.89
100	<u>Sales</u>	✓ 18,269.26
✓ 100	<u>Real Estate Building</u>	336.41
✓ 100	<u>Furniture & Fixtures</u>	✓ 336.41
	In correct error in distribution of add. 2413.	
	(Memo Mt. S. "10/1/07")	
✓ 100	<u>Accounts Payable</u>	99.19
✓ 100	<u>Manufacturing (Cabinet)</u>	✓ 99.19
	In charge the following account with credit of \$500. by gift of W. Whitworth Vinner and Wm. S. gift of Oak House destroyed by fire in December, 16th December, 16th 1907. 10/1/07	
✓ 100	<u>Exp. Loss</u> \$ 99.19 <u>Cabinet</u>	✓ 99.19
✓ 100	<u>Summaries</u>	
✓ 100	<u>Accounts Payable</u>	✓ 1,207.89 70.
	For amount of bills rendered during month of December, 1907, as recorded in Register of Disbursements folios 393 to 399, inclusive to be charged to	
100	<u>General Expense</u>	35,550.71
✓ 100	<u>Machinery & Tools</u>	3,144.89
✓ 100	<u>Real Estate Building</u>	673.61
✓ 100	<u>Furniture & Fixtures</u>	10,550.61
✓ 100	<u>Advertising Disbursements</u>	72.20
✓ 100	<u>Salaries</u>	500.00
✓ 100	<u>National Phone Co. Fixtures</u>	3,169.38
✓ 100	<u>Manufacturing</u>	70,112.40
✓ 100	<u>Accounts Payable</u>	29,533.1

Orange, N.J. December, 1907.

31		
✓ 100	<u>Summaries</u>	
	<u>Manufacturing</u>	✓ 22,805.79
	For amount of material transfers recorded during month of December, 1907, as recorded in the Register of Disbursements folios 400 to 406, inclusive to be charged to	
100	<u>General Expense</u>	760.89
✓ 100	<u>Machinery & Tools</u>	184.90
✓ 100	<u>Real Estate Building</u>	815.51
✓ 100	<u>Furniture & Fixtures</u>	962.01
✓ 100	<u>Manufacturing</u>	1,519.61
✓ 100	<u>Accounts Payable</u>	37.84
✓ 100	<u>Accounts Receivable</u>	299.69
✓ 100	<u>Accounts Payable</u>	✓ 299.69
	To transfer for the following accounts	
1	Edison Mfg. Co. 3436.50	7
2	Natl. Phone Co. 689	12
3	National Phone Co. 314.85	10
4	Edison Storage Battery Co. 46	5
5	Thomas Edison 49	1
✓ 100	<u>General Expense</u>	✓ 120.4
✓ 100	<u>Accounts Payable</u>	✓ 30
	Cash Disbursements allowed accounts Payable for profit settlement of folios during month of December, 1907, as recorded in cash book folios 95 to 99, inclusive	

Orange, N.J. January 1908.

100	<u>Accounts Receivable</u>	11750	
100	<u>Accounts Receivable</u>	11750	
	To transfer the following accounts		
1	Bates Accts Rec 11750	Bates Accts Rec 1	
3	Insurance 771	Kelly, Benson & Co 101	
3	"	375 Insured House Sept 14 4.	
	"	in 100 Insured House Oct 1	
100	<u>General Expenses</u>	2903.1	
100	<u>Accounts Receivable</u>	2903.1	
	Amount of cash discounts allowed Bates Accts Rec for prompt payment of accounts during month of January 1908 as recorded in Cash Book 149 folios 1 to 9 inclusive.		
	Bates Accts Rec # 29.22		
100	<u>General Expenses</u>	12500.4	
100	<u>Accounts Receivable</u>	12500.4	
	Transferring amount of Bates Accts Rec for month of January 1908 for Bates Accts Rec to General Exp.		
1	Bates Accts Rec 11750		
1	Bates Accts Rec 11750		
100	<u>Accounts Receivable</u>	11750	
100	<u>Accounts Receivable</u>	11750	
	To transfer list # 20103 quoted in letter to Mr. of Consummation Hand Stamp Co. instead of Consummation Stamp & Boring Machine Co.		
1	Bates Accts Rec 117	Bates Accts Rec 1	
50	Consummation Stamp Co. 117	Consummation Hand Stamp Co. 4	
100	<u>Accounts Receivable</u>	774.1	
100	<u>Accounts Receivable</u>	774.1	
	To transfer the following accounts		
	as per London Letter of 11/25/07		
	attached to National Phone Co. J.F. Knecht		
	" 2272 - 1/25/08		
1	National Phone Co. 277	Bates Accts Rec 1	
	National Phone Co. 277 101		

Orange, N.J. January 1908.

70	<u>Accounts Payable</u>	4946.1	
100	<u>General Expenses</u>	4946.1	
	Amount of cash discounts deducted in prompt settlement of Accounts Payable during month of January 1908 as recorded in Cash Book 149 folios 1 to 9 inclusive		
100	<u>General Expenses</u>	1305.4	
100	<u>Accounts Receivable</u>	1305.4	
	For amount of cash discounts allowed accounts Receivable for prompt payment of accounts during month of January 1908 as recorded in Cash Book 149 folios 1 to 9 inclusive		
100	<u>Accounts Receivable</u>	19156.1908	
100	<u>General Expenses</u>	19156.1908	
	For amount of sales during month of January 1908 as recorded in Abstract of Sales folios 317 to 318 & to be credited as follows		
100	<u>General Expenses</u>	101.57	
100	<u>Sales</u>	41911.6038	
70	<u>Accounts Payable</u>	68794.4	
100	<u>Accounts Payable</u>	68794.4	
	To transfer the following accounts		
10	National Phone Co. 1600.25		
12	National Phone Co. 1000.00		
7	Edwin Mfg. Co. 1160.30		
5	Edwin Mfg. Co. 110.00		
9	Edwin Mfg. Co. 109.00		
70	<u>Accounts Payable</u>	3240.1	
70	<u>Accounts Payable</u>	3240.1	
	To transfer the following amount representing one 1/2% to National Phone Co.		
100	National Phone Co. 1000.00		

Orange, N.J. January 1908.

70	<u>Accounts Payable</u>	1724	
70	<u>Accounts Payable</u>		1724
	To transfer account representing Bill A. H. G. & Co. to National Phone Co. as per 10 National Phone Co. 174 Edwin Rutland Bank 4		
70	<u>Accounts Payable</u>	4195.4	
70	<u>Accounts Payable</u>		4195.4
	To transfer to our ledger following amount representing cash received and credited in error of National Phone Co. 10 National Phone Co. 41.00 O. R. Rogers. 708.		
1	<u>Surplus</u>		
70	<u>Accounts Payable</u>	11975.149	
	Amount of bills rendered during month of January 1908 as recorded in Register of disbursements from 401 to 407 and 412 charged to		
100	<u>General Expense</u>	375.6674	
746	<u>Machinery & Tools</u>	1430.100	
760	<u>Real Estate & Building</u>	946.5474	
769	<u>Furniture & Fixtures</u>	617.145	
766	<u>Liberty Insurance Business Fund</u>	417.00	
754	<u>National Phone Co. Interest on</u>	3120.120	
774	<u>Manufacturing</u>	7012.024	
70	<u>Accounts Payable</u>	131.6464	
1	<u>Surplus</u>		
70	<u>Manufacturing</u>	19772.140	
	Amount of National Telephone rendered during month of January 1908 as recorded in Register of disbursements from 401 and to 412 charged as follows.		
100	<u>General Expense</u>	646.5474	
746	<u>Machinery & Tools</u>	33.08	
760	<u>Real Estate & Building</u>	219.90	
769	<u>Furniture & Fixtures</u>	284.40	
774	<u>Manufacturing</u>	12978.91	
70	<u>Accounts Payable</u>	18.62	

Orange, N.J. February 1908.

100	<u>General Expense</u>	10000.4	
40	<u>Accounts Payable</u>		10000
	To transfer amount of 10000.40 Expense for month of February 1908 from Bate Accounts Receivable to General Expense.		
1	<u>Bate Accounts Receivable</u>	100.00	
2	<u>Bate Extra Expense</u>	100.00	
41	<u>Accounts Payable</u>	11024	
41	<u>Accounts Payable</u>		11024
	To transfer the following account: Bate Accounts Receivable 11.00 Bate Accounts 1 Attorneys fee 11.00 Dana & Grogan 104		
41	<u>Accounts Payable</u>	504	
41	<u>Accounts Payable</u>		504
	To transfer the following account: Impress Bank Bate 1.50 Bate Accounts 1 Impress Bank Bate 101		
70	<u>Accounts Payable</u>	35004	
41	<u>Accounts Payable</u>		35004
	To transfer amount of 35004.00 Bate Accounts representing their bill of 35004.00 1908 deducted in settlement of 7061 201 G. W. Hampton 35.00 Bate Accounts 1 35.00 G. W. Hampton 3		
41	<u>Accounts Payable</u>	20124	
41	<u>Accounts Payable</u>		20124
	To transfer the above amount from the account of The W. B. Hathaway Co. Cincinnati, Ohio, as per their request in letter dated 7/6/07 attached.		
1	<u>Bate Accounts Receivable</u>	1	
106	<u>The Hathaway Company</u>	2	

Orange N.J. February 1901.

41	Accounts Receivable		12270.4	
41	Accounts Receivable		12270.4	
	Received this day note from Taylor Bros., Cleveland, Ohio, payable four months, at Central National Bank, Cleveland, Ohio, in settlement of their of \$1.25/100.			
1	Bates Accts Rec'd 113.33	1		
52	Bates Ints Rec'd 122.33	2		
41	Accounts Receivable		14790.4	
41	Accounts Receivable		14790.4	
	To transfer the following accounts			
1	Bates Accts Rec'd 141.33	1		
102	Suspense 32	3		
3	Suspense 14	50		
3	Suspense 144	101		
111	Chas. Sherrick 16	3		
9	Geo. D. Barnard & Co. 116	3		
51	Geo. A. Kelly, Co. 1366	3		
3	Suspense 20	105		
3	Suspense 2300	50		
53	W. B. Mason 50	3		
56	John B. Martin 17	3		
20	Walter Hunsicker 123	3		
41	Accounts Receivable		165.4	
41	Accounts Receivable		165.4	
	To transfer the following amount			
1	Bates Accts Rec'd 1.65	1		
101	Imperial Bank Bk'd 165	3		
41	Accounts Receivable		762.4	
41	Accounts Receivable		762.4	
	To suspense the following items			
100	Suspense 19	101		
100	Suspense 44	51		
100	Suspense 65	51		
100	Suspense 91	50		
100	Suspense 91	51		
100	Suspense 50	51		
100	Suspense 14	51		
100	Suspense 14	51		
51	Suspense 25	100		

Orange N.J. February 1901.

70	Accounts Payable			
41	Accounts Payable		504	
	To transfer the above items			
225	Sherry, 100	100		
70	Accounts Payable		504	
295	Accounts Payable		504	
	To transfer the following amount representing			
101	Sherry, 100	100		
41	Accounts Payable		60000.4	
215	Accounts Payable		60000.4	
	To cancel note dated October 3rd of			
	in place of same, received this day			
	to renewal note @ 175-93 each payable			
	in six months, duly protested			
	together with 900.00 Cash.			
1	W. H. Hunt & Co. 650.00			
114	Bond Interest		60000.4	
209	Bond Interest		60000.4	
	The amount of Bond Interest due			
	this day on coupon No. 21.			
41	Accounts Payable		35000.4	
41	Accounts Payable		35000.4	
	To transfer the above amount to			
	National Bank Co.			
1	National Bank Co. 3500.00			
70	Accounts Payable		350.4	
70	Accounts Payable		350.4	
	To write of the following amounts for			
101	Suspense 2.33	50		
3	Suspense 60	101		
8	Suspense 60	101		

Orange N.J. February 1901

70	Accounts Payable	29		3474	
41	Accounts Receivable				3474
	To transfer the above amount from Accounts Payable to Accounts Receivable				
71	C. H. Hanson	3 1/2	Bates Accts. Receivable		
			C. H. Hanson	1	
100	General Expense	29		38274	
41	Accounts Receivable				38274
	Amount of cash discount allowed for prompt payment of Bates Mfg. Co. during month of February 1901, as noted in Cash Book 9 folios 10-17 inc.				
			3827		
			Bates Accts. Receivable	1	
70	Accounts Payable	29		394	
100	General Expense				394
	Amount of cash discount deducted in prompt settlement of B. during month of February 1901, as noted in Cash Book 9 folios 10-17 inc.				
1	General Expense	29		35270	
41	Accounts Receivable				35270
	Amount of cash discount allowed for prompt payment of Bates Mfg. Co. 3/4 during month of February 1901, as noted in Cash Book 9 folios 10-17 inc.				
			316 1/2		
			Bates Accts. Receivable	1	
1	Accounts Payable	29		399	
41	General Expense				399
	Amount of cash discount deducted in prompt settlement of B. during month of February 1901, as noted in Cash Book 9 folios 10-17 inc.				

Orange N.J. February 1901

1	Surplus	29			
70	Accounts Payable				417946755
	To amount of first distribution of funds received during month of February 1901, as recorded in the Register of Disbursements folio 10-17 inc. to be kept				
100	General Expense				42461394
247	Machinery & Tools				24646261
261	Real Estate & Buildings				6141154
239	Expenses & Salaries				1351554
295	Expenses & Salaries - General Fund				110083
57	Admission Mfg. Co. Patent 7/4				3555114
257	Patent Mfg. Co. Patent 7/4				3913204
119	Manufacturing				99301294
70	Accounts Payable				33402
1	Surplus	29			
179	Manufacturing				1122767
	To amount of Raw Material Transfer received during month of February 1901, as recorded in the Register of Disbursements folio 11-17 inc. to be charged to				
100	General Expense				5399954
247	Machinery & Tools				9364
261	Real Estate & Buildings				157054
239	Expenses & Salaries				615374
119	Manufacturing				1996054
277	Profit & Loss	29			12794
41	Accounts Receivable				12794
	To net amount of Sales Expense for fiscal year ending February 29 th 1901				
1	Bates Accts. Receivable 10 1/2				
3	Bates Expense 10 1/2				
100	General Expense	29			28474
261	Real Estate & Buildings				28474
	To record distribution of surplus for year 1901, which was distributed in year to B. B. should have been from Expense & B. B.				

Orange N. J. February 1905.

70	Accounts Payable	16761.4	
70	Accounts Payable	16761.4	
	Transfer for above amount representing sundry bills to books of National Bank		
10	National Bank 100.00		
179	Manufacturing	1063.8	
120	General Expense (BSP)	1063.8	
	Transfer cost of Shop Order #2365 distributed to General Expense (BSP) instead of Miscellaneous Order # (Merry Henderson 1/4/05).		
179	Miscellaneous Order #10.63		
70	Accounts Payable	118570.53	
	Transfer of above indebtedness of creditors for month of February 1905 as follows:		
120	General Expense	30650.72	
249	Machine Shop	9150.00	
26	Gas Estate Building	5671.1	
230	Insurance Building	17463.4	
200	Optical Shop to Shop	34273.5	
5	Edison Works to Shop	5888.5	
179	Manufacturing	10422.54	
41	Accounts Receivable	146270.24	
	Sundry		
	The amount sales during month of February 1905 as recorded in Abstract of Sales for 2nd to 3rd week and it is credited as follows:		
120	General Expense	19952	
129	Sales	146021.41	
129	Manufacturing	3430	

Orange N. J. February 1905.

279	Profit & Loss	93225.04	
249	Profit & Loss	93225.04	
	Write off 50% of original cost of old building formerly known as W. as this amount represents the cost of that portion of the building which was torn down.		
	(Original cost 18,704.50)		
	50% 9352.25		
279	Profit & Loss	24500.0	
249	Profit & Loss	24500.0	
	Write off 50% of original cost of old office building formerly known as W. as this amount represents the cost of that portion of the building which was torn down.		
	(Original cost 49,000.00)		
	50% 24500.00		
75	Profit & Loss	12250.1	
100	General Expense (BSP)	12250.1	
	Transfer amount of one hundred and 75 Cts. and (part of) 21st charging part latter 4/1.		
70	Accounts Payable	37078.94	
41	Accounts Payable	37078.94	
	Transfer the following amount:		
1	Edison Works	992	
10	National Bank	36979.77	
12	Edison	5.02	
2	Edison Storage Battery	7.15	
41	Accounts Receivable	696.4	
279	Profit & Loss	696.4	
279	Profit & Loss	696.4	
	Transfer of Suspense account of fiscal year ending February 27th 1905		
51	Suspense	6.72	

Orange St. February, 1908

101	General Expense (H. & R.)	300.1	
101	Real Estate & Buildings	✓	300
To transfer this amount which covers the cost of 10 bags cement which were charged in error to S.S.O. 1702, they should have been charged to S.S.O. 2557 (per instruction of H. & R. boys)			
177	Manufacturing	4457.66	
177	Manufacturing	✓	4457.66
To transfer balance of papering account in Mfg. Ledger to Photo P. papering 1457.25 Photographs			
157	Salaries	3733.44	
157	Salaries	✓	3733.44
To transfer following accounts 2/10/08 5,324.01			
221	papering	801	
221	Photography	3733.44	
221	Photography	✓	3733.44
279	Profit and Loss	24336.00	
279	Profit and Loss	✓	24336.00
To transfer to Profit and Loss the following accounts			
7.00 Interest 12300.00 1/99			
Dividends 12036.00 2/99			
279	Profit and Loss	37546.10	
279	Profit and Loss	✓	37546.10
To debit Profit and Loss with amount shown to Feb. 29th in accounts credited below			
Quint 4 1/2% Interest Feb. 11/93 59.4			
Paid Ch. & Co. " " 3346.35 2/99			

Orange St. February, 1908

107	Salaries	4780.58	
107	Salaries	✓	4780.58
To transfer balance of Port Factory to General Expense			
161	Port Factory 1491.00		
161	Port Factory	✓	1491.00
177	Manufacturing	14763.64	
177	Manufacturing	✓	14763.64
To transfer amount of Port Loss on Antimide Garage as shown by shop order 241.50			
29 Feb. Loss 1476.00 102			
177	Manufacturing	14763.64	
177	Manufacturing	✓	14763.64
To amount of Income Distribution of Raw Material Transfer vouchers during month of February 1908 (per 1/2)			
1/2 of amount of Feb. 1/2) and charges 12.50			
101	General Expense	5526.07	
177	Manufacturing	14099.61	
177	Manufacturing	✓	14099.61
101	General Expense	856.6	
101	General Expense	✓	856.6
To charge G.E. (Imp. & Exp. Repair) with cost of fence around property on Adams av., Kew-Forest av. and Erie St. which property is used as a lumber yard			
161	Port Factory	856.6	
161	Port Factory	✓	856.6
177	Manufacturing	5266.41	
177	Manufacturing	✓	5266.41
To charge Photograph account with difference in Raw Material account as shown by Summary of Feb. 29th 08			
177	Photography	5266.41	
177	Photography	✓	5266.41

Orange, N.J. February 1908

29 th		
101 General Expense (C.R.S.)	5415.16	
119 Manufacturing	5415.16	
To charge Packing & Draying with difference of Box Factory account as shown by Inventory of Feb. 29/08.		
161 Box Factory	2415.52	
119 Manufacturing	1395.69	
101 General Expense	1395.69	
To transfer expenses directly charged to Bates Mfg. Co. business for fiscal year ending Feb. 29 th 1908		
181 Auto. M. Machines	1395.69	
129 Manufacturing	16415.66	
101 General Expense	16415.66	
To distribute General Expense (Bates) over the following manufacturing accounts		
Percentage - 30.271		
1 Phonographs	323.679.42	
181 Auto. M. Machines	987.71	
41 Wax	163.795.08	
121 Miscellaneous	4111.03	
141 Fan Motors	73.77	
81 Repeating Kinetographs	33.337.82	
201 Cabinets	106.676.56	
41 Accounts Receivable	16075.50	
159 Sales	16075.50	
To charge Natl. Phon. Co. with an account to credit Profit on Phon. & Wax account equal 15% of Sales & Machine's plus General Expense & Depreciation		
2571 Nat. Phon. Co.	15%	
Phon. 1196.777.44	308.021.12	1363.778.56
Wax 773.824.67	125.074.12	677.997.05
		301.765.50
Profit shown by Books - Phon. 70.300.00		
Wax 70.595.14	140.895.14	
Continued	160.705.02	

Orange, N.J. February 1908

29 th		
Continued		
151 Natl. National Phon. Co.	160.705.02	
1 Credit Phon. Wax	134.241.03	
	26.463.99	
159 Sales		
129 Manufacturing	263.81.32	858
To transfer to Sales cost of goods sold during fiscal year ending Feb. 29/08 as shown by Inventory taken on that date		
1 Phonographs	1.363.778.82	1
181 Auto. M. Machines	53.794.22	151
21 Bates Mfg.	1250.25	21
41 Wax	647.927.55	41
121 Miscellaneous	11.303.87	121
141 Fan Motors	712.19	141
81 Repeating Kinetographs	116.786.53	81
201 Cabinets	429.877.50	201
61 Making Sales	8186.95	61
159 Sales		
279 Profit and Losses	309.777.21	
Profit and Losses realized on the following accounts during fiscal year ending Feb. 29 th 1908.		
1 Phonographs	204.566.07	1
181 Auto. M. Machines	11.291.98	181
21 Bates Mfg.	1.684.40	21
41 Wax	97.189.18	41
121 Miscellaneous	92.02	121
141 Fan Motors	420.13	141
81 Repeating Kinetographs	90.67.10	81
61 Making Sales	1134.22	61
201 Cabinets	164276.84	201

Grange, Ill., February, 1908.

Profit & Loss

29

Deposits following accounts

Machinery & Tools 11,063.10 24/1
Automobile 4,181.00 9/1
Furniture & other 10,723.65 33/4

339,746.61

339,746.61

March 1908 - January 1909

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Gregory Jankunis
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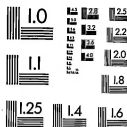
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